

# VENTURA / SANTA BARBARA 101 HOV PROJECT

From Mobile Pier Road to Casitas Pass Road  
Ventura County and Santa Barbara County  
District 7 US 101  
Ventura County (PM 39.8) to  
Santa Barbara County (PM 2.2)  
EA 260700

Prepared by the California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by the State of California Department of Transportation under its assumption of responsibility pursuant to 23 U.S.C. 327

August 2008

## **INITIAL STUDY with Proposed Mitigated Negative Declaration/ ENVIRONMENTAL ASSESSMENT**





The State of California Department of Transportation is proposing to construct a High Occupancy Vehicle lane in each direction of the U.S. 101 within the existing median between the Mobil Pier Undercrossing (PM 39.8) in Ventura County and Casitas Pass Road (PM 2.2) in Santa Barbara County

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Submitted Pursuant to: (State) Division 13, Public Resources Code  
(Federal) 42 USC 4332(2)(C), 23 USC 327

THE STATE OF CALIFORNIA  
Department of Transportation

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*August 1, 2008*  
Date of Approval

*Ronald Kosinski*  
Ronald Kosinski  
Deputy District Director  
District 7 Division of Environmental Planning  
California Department of Transportation





## **Proposed Mitigated Negative Declaration**

Pursuant to: Division 13, Public Resources Code

### ***Project Description***

The State of California Department of Transportation (The Department) proposes to construct a High Occupancy Vehicle lane in each direction on the U.S. 101 within the existing median between the Mobil Pier Undercrossing (PM 39.8) in Ventura County and Casitas Pass Road (PM 2.2) in Santa Barbara County.

### ***Determination***

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the Department's intent to adopt a Mitigated Negative Declaration for this project. This does not mean that the Department's decision regarding the project is final. This MND is subject to modification based on comments received by interested agencies and the public during public circulation. The Department has prepared an Initial Study for this project and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would not significantly affect topography, seismic exposure, floodplains, wetlands or water quality.

The proposed project would not significantly impact any sensitive plant or animal species, other wildlife, riparian habitat, wetlands, or agricultural land.

The proposed project would not significantly affect land use, public facilities or other socio-economic features, cultural resources, open space or parklands.

The proposed project would result in increased noise levels along its route, but with the addition of soundwalls, these effects would be reduced to acceptable levels.

The proposed project would promote improved regional air quality.

The proposed project would affect the scenic resources in the area, but with proposed landscape treatment, the effects would be minimized.

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Ronald Kosinski  
Deputy District Director  
District 7 Division of Environmental Planning  
California Department of Transportation

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Date



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### **List of Technical Studies that are bound separately**

<b>Air Quality Assessment</b>	<b>April 2008</b>
<b>Historic Property Survey Report</b>	<b>April 2008</b>
<b>Archaeological Extended Phase I Report</b>	<b>May 2008</b>
<b>Community Impact Analysis</b>	<b>July 2008</b>
<b>Cumulative Impact Analysis</b>	<b>July 2008</b>
<b>Geo-technical Report</b>	<b>May 2008</b>
<b>Hazardous Waste Report Site Investigation</b>	<b>March 2008</b>
<b>Hydraulic Study</b>	<b>March 2008</b>
<b>Natural Environment Study</b>	<b>November 2007</b>
<b>Noise Study Report</b>	<b>December 2007</b>
<b>Supplemental Noise Study</b>	<b>April 2008</b>
<b>Traffic Analysis Report</b>	<b>March 2008</b>
<b>Supplemental Traffic Report</b>	<b>July 2008</b>
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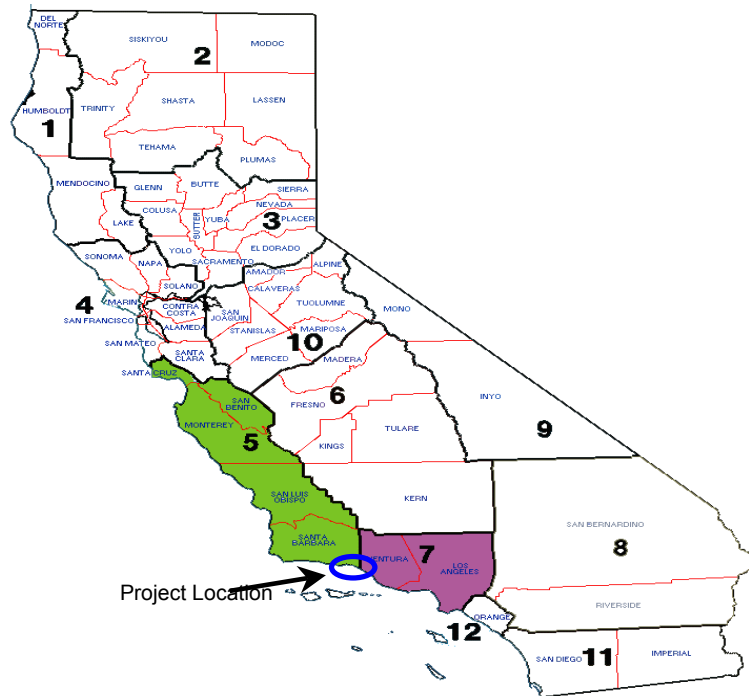
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# Chapter 1 Proposed Project

## 1.1 Introduction

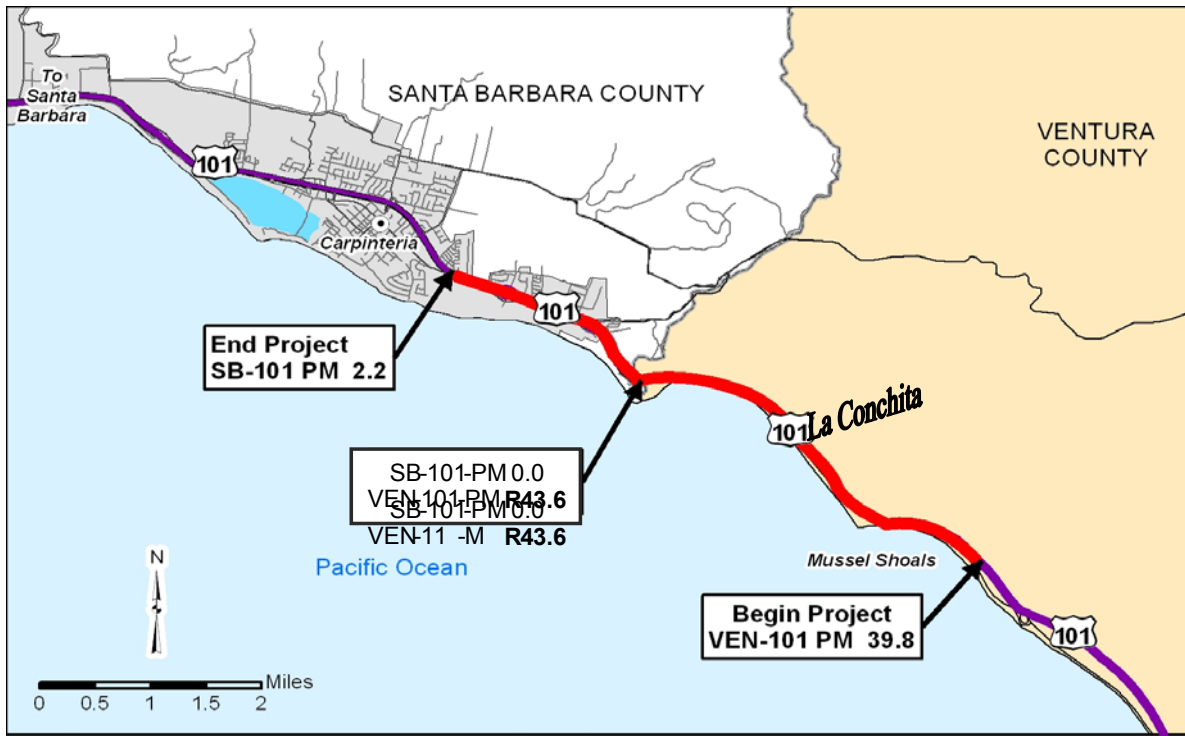
U.S. Highway 101 (U.S. 101) is a primary north-south route extending along the coastal area of the State of California. The segment of the highway within the project limits connects Ventura County to Santa Barbara County as shown in Figure 1.1-1 and 1.1-2 and operates as a four-lane highway.

The State of California Department of Transportation (the Department) proposes to construct a High Occupancy Vehicle (HOV) lane in both directions within the existing median between the Mobil Pier Undercrossing (PM 39.8) in Ventura County and Casitas Pass Road (PM 2.2) in Santa Barbara County and would connect to the Department's District 5 South Coast 101 HOV project at the northern terminus, which is currently in the planning phase. Proposed project features include Intelligent Transportation Systems (ITS), improvement of median barriers and closure of median openings. The length of the proposed project is six miles and would provide six lanes, three northbound (NB) lanes and three southbound (SB) lanes through the communities of Mussel Shoals, La Conchita, and Rincon in Ventura County and the City of Carpinteria in Santa Barbara



**Figure 1.1-1 Project Location on the Department District Map**

County, California. Three (3) alternatives have been proposed: the NO BUILD Alternative, the MINIMUM BUILD Alternative, and the FULL BUILD Alternative.



**Figure 1.1-2 Project Vicinity Map**

In addition to congestion relief, the Department proposes to construct a Pedestrian Undercrossing at La Conchita, upgrade the access at Mussel Shoals and La Conchita and close median openings at Mussel Shoals, La Conchita, and Tank Farm. Environmental studies for this portion of the project were completed in the 2002 La Conchita/Mussel Shoals Access Improvement Mitigated Negative Declaration/Findings of No Significant Impact, (MND/FONSI) and proposed funding for construction is included as part of the VEN/SB 101 HOV project. This document can be accessed on the Internet at: [http://dot.ca.gov/dist07/resources/envdocs/docs/LaConchita\\_access\\_ndfonsi.pdf](http://dot.ca.gov/dist07/resources/envdocs/docs/LaConchita_access_ndfonsi.pdf)

The proposed project is fully funded and is included in the Ventura County 2004 RTP. The 2004 RTP was found to conform by SCAG on April 1, 2004 as Resolution #06-471-3 and approved by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) on June 7, 2004. The project is also included in SCAG financially constrained 2006 Regional Transportation Improvement Program (RTIP) as Resolution #06-477-2. The SCAG 2006 RTIP was found to conform by FHWA and FTA on October 2, 2006. The design concept and scope of the proposed project is consistent with the project description in the 2004 RTP Amendment #3, the 2006 RTIP, and the assumptions in SCAG's regional emissions analysis.



## **Background**

In the early 1960s consideration for widening the U.S.101 in Santa Barbara County was introduced. In 1974, the project area was analyzed in the Department's Feasibility Report and a six-lane highway was recommended. Consideration for widening the Ventura County portion of the project began in the late 1990s and in 1999, projected growth and capacity requirements were evaluated in the Department's Transportation Concept Report (TCR) and widening was recommended. In 2001, widening the Santa Barbara County portion of the project was analyzed in the Department's TCR and a larger facility was recommended.

The Department, Santa Barbara County Association of Governments (SBCAG), Ventura County Transportation Commission (VCTC); and state and local agencies worked together to develop the 2002 "South Coast Highway 101 Deficiency Plan" and the 2006 "101 In Motion Plan." These plans included alternatives for widening of the highway by adding lanes in each direction and the "101 In Motion Plan" recommended the addition of a High Occupancy Vehicle (HOV) lane in each direction. Congestion relief was also analyzed in the VCTC Congestion Management Program (CMP) and this plan also recommended adding lanes and implementing a peak hour HOV lane.

In 1968, consideration for constructing a pedestrian crossing at La Conchita began when the Department proposed a pedestrian crossing at La Conchita for safe beach access. In 2002, an environmental document was approved for a proposed pedestrian undercrossing (PUC) at La Conchita. In 2005, the PUC at La Conchita was recommended in the Ventura County Transportation Commission (VCTC) Congestion Management Plan and in 2006, VCTC commenced design of the proposed PUC.

## **Existing Facility**

The U.S. 101 is part of the National Highway System and has been identified by the Federal Department of Transportation and the Department of Defense as a route in the Strategic Highway Corridor Network and is classified as an urban freeway. It is on the State Freeway and Expressway System and is a designated Focus Route on the Interregional Road System. It is also a State Highway Extra Legal Load Route and is on the Surface Transportation Assistance Act Truck Network.

The proposed project segment of the U.S. 101 connects Ventura County to Santa Barbara County and operates as a four-lane expressway to freeway, respectively. The original two-lane highway was completed in 1938. In 1951, the two lane highway was expanded to four lanes in its current alignment. The median barrier was constructed in 1985.

In the northbound direction, beginning in the vicinity of Mussel Shoals the U.S. 101 operates as a four lane expressway. The posted speed is 65 mph. Northbound U.S. 101 provides three 12-foot lanes and changes to two 12-foot lanes roughly 0.60 miles upstream of the Mussel Shoals access. U.S. 101 continues north with two lanes past La Conchita and Tank Farm and then widens to three lanes 0.35 miles upstream of the Bates Road undercrossing. U.S. 101 continues with three lanes in Santa Barbara County, tapering down to two lanes 0.30 miles downstream of the SR 150 overcrossing at the northern extent of the project limits.

In the southbound direction, beginning in the vicinity of Casitas Pass Road in Santa Barbara County, southbound U.S. 101 operates with two 12-foot lanes. Auxiliary lanes are provided between Bailard Avenue and SR-150 and between SR-150 and Bates Road. South of Bates Road, southbound U.S. 101 offers two 12-foot lanes until 0.25 miles downstream of Mussel Shoals access, where U.S. 101 widens to three 12-foot lanes.

In Ventura County there are three median openings at Mussel Shoals, Santa Barbara Avenue (La Conchita), and Tank Farm. These openings provide full access in and out of Mussel Shoals and La Conchita by offering:

- Left turn deceleration and storage lanes for traffic for turning in
- Right turn deceleration lanes for turning in
- Left turn acceleration lanes for traffic turning out
- Right turn acceleration lanes for turning out

At Tank Farm, the median opening is designed to accommodate U-turns only. There are no deceleration or acceleration lanes.

In Ventura County, the median width varies from 22 to 46 feet and contains a single row of double thrie-beam median barrier. Inside shoulders vary from 2 to 11 feet. Outside shoulder vary from zero to 11 feet.

In Santa Barbara County, the median varies from 21 to 41 feet. Inside shoulder width varies from 4 to 10 feet, and outside shoulder width varies from 8 to 10 feet. The median is landscaped between a thrie-beam barrier on each side of the freeway.

There is a bikeway in both directions between U.S.101/SR 150 interchange and Seacliff (Old Rincon Highway)/ U.S. 101 interchange just south of Mussel Shoals. Cyclists are allowed because there is no alternative route to the U.S. 101 that offers a direct route

between the Seacliff interchange and Carpinteria. There is an existing non-standard bicycle facility located on the southbound U.S. 101 between the U.S. 101/150 Interchange and the Seacliff exit. Just south of Bates Road Interchange there is a 2 mile section with a non-standard striped bikeway adjacent to the travel lane, with a 3-foot buffer between the bikeway and emergency parking lane, that ends several feet before the off-ramp to Mussel Shoals. The existing NB non-standard bikeway connects to the U.S. 101 from the frontage road (Old Rincon Highway) just south of Mussel Shoals and continues to the U.S. 101/150 Interchange. After the intersection of U.S.101 and Old Rincon Road, the NB bicycle facility consists of a variable shoulder with non-standard pavement markings. The bikeway is part of the Pacific Coast bicycle route and is frequently used for recreational and charitable bicycle rides. Emergency shoulder parking is allowed from south of Bates Road Interchange to north of the community of Mussel Shoals.

A Union Pacific Railroad track runs parallel to the US 101, approximately 50 feet east of the northbound edge of U.S 101 and 62 feet from the western edge of Seaside Ave in La Conchita. It continues northbound until the Wave Overhead Bridge where it crosses under the U.S.101 to the southside until the northern project limits. The railroad property within the project limits varies in width from approximately 60 to 100 feet.

There are four structures: Bates Road Undercrossing (Bridge No. 51-279 L) located in Ventura County and the Wave Overhead (Bridge No. 51-229 R/L) and structures at the U.S. 101/SR 150 Interchange and Bailard Avenue Interchange located in Santa Barbara County.

## **Purpose and Need**

### **1.1.1 Purpose**

The purpose of this project is to improve mobility by reducing existing and forecasted traffic congestion on U.S. 101 within the project limits. This project would reduce congestion and is expected to enhance traffic operations by adding capacity in an area that experiences delays during peak hours and enhance safety within the project limits, while minimizing environmental and socio-economic impacts. Constructing a HOV lane in this area is a critical element to improve operations as identified in regional transportation planning studies including the SBCAG 101 In Motion Plan and VCTC Congestion Management Program and the Department's TCR. The proposed project is intended to achieve the following goals:

- To reduce existing and forecasted traffic congestion and to eliminate the existing freeway lane bottleneck and to reduce vehicle weaving within the project limits.
- To facilitate through vehicle trips by increasing the capacity of vehicles moving through the regional highway system.
- To decrease travel times for travelers and promote ridesharing.
- To facilitate the efficient flow of goods and services through this area.

### **1.1.2 Need**

Disproportionate demand is overwhelming the existing capacity of the U.S. 101 during peak periods including weekends. The 2006 Average Annual Daily Traffic (AADT) was calculated to be 82,000 vehicles and during peak periods, the highway is congested for several hours a day in each direction.







Based upon regional growth studies, the population of Ventura and Santa Barbara County is expected to increase. The population in Ventura County is expected to increase by 26 percent from 753,197 in 2000 to 951,080 in 2025 [Southern California Association of Governments (SCAG) 2001 Regional Growth Trends] and the population of Santa Barbara County is expected to increase by 20 percent from 417,500 in 2005 to 459,600 in 2020 (SBCAG Regional Growth Forecast 2007).

In addition to population growth, long distance commuting is escalating as affordable housing is located farther away from employment centers, resulting in an increase in the number of people commuting from Ventura County to Santa Barbara County. Surveys indicate over 15,000 vehicles commute daily from Ventura to Santa Barbara (SBCAG 2002 Commuter Profile Survey). The coastal location, natural amenities, and temperate weather have made this area a popular tourist destination, resulting in temporary traffic increases on weekends and during the summer. Without improvements to the existing highway, population growth and increasing travel demand would present even greater challenges to an already overtaxed transportation facility. Current congested conditions would continue to cause delay for local traffic, transit, commercial trucking, tourists, commuters, and emergency vehicles.

### **Traffic Demand and Capacity**

The quality of traffic flow can be defined in terms of level of service (LOS). The measure used to provide an estimate of LOS is density. There are six LOS, ranging from LOS A (free traffic flow with low volumes and high speeds, resulting in low densities) to LOS F (traffic volumes exceed capacity and result in forced flow operations at low speeds, resulting in high densities), refer to the Figure 1.2-1 on the next page for LOS thresholds

on a basic freeway segment. Within the project limits, the U.S.101 experiences a deficient LOS and exceeds capacity during peak hours.

<b>LEVELS OF SERVICE</b> for Multi-Lane Highways			
Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
<b>A</b>		60	Highest level of service. Traffic flows freely with little or no restrictions on maneuverability. <b>No delays</b>
<b>B</b>		60	Traffic flows freely, but drivers have slightly less freedom to maneuver. <b>No delays</b>
<b>C</b>		60	Density becomes noticeable with ability to maneuver limited by other vehicles. <b>Minimal delays</b>
<b>D</b>		57	Speed and ability to maneuver is severely restricted by increasing density of vehicles. <b>Minimal delays</b>
<b>E</b>		55	Unstable traffic flow. Speeds vary greatly and are unpredictable. <b>Minimal delays</b>
<b>F</b>		<55	Traffic flow is unstable, with brief periods of movement followed by forced stops. <b>Significant delays</b>

Source: 2000 HCM, Exhibit 21-3, Speed-Flow Curves with LOS Criteria for Multi-Lane Highways

**Figure 1.1-3 Levels of Service for Multi-Lane Highways**

The Department's Freeway Operations' primary objective is to improve the LOS, ensure trip reliability, and provide motorists with accurate real-time information on highway conditions. The criteria for the current and projected LOS was derived from the Department's Highway Capacity Manual for a free flow speed of 50 to 60 mph and from the Department's criteria considering the minimum accepted LOS with a flowing volume of 2000 to 2200 vehicles per hour per lane (VPHPL). Table 1.2-1 compares the traffic volumes and LOS for 2006, existing conditions, and the projected conditions for 2036.

Since this project spans two counties, more congested conditions were used to analyze the project as a whole. The peak month traffic in 2006 was 82,000 vehicles and the peak

hour demand was 8,200 vehicles. The VPHPL was estimated to be 1,822 vehicles and LOS E, with a VPHPL design capacity of 2,000 vehicles. Traffic in the vicinity of the project has an average of 6-7% truck traffic.

**Table 1.1-1 Traffic Volumes and LOS within the Project Limits**

	Lanes	Average Annual Peak month Traffic	AM/PM Peak Hour Traffic	Demand Vehicles per hour per lane	Capacity Vehicles per hour per lane	LOS	Vehicle hours (VH)
EXISTING 2006	4 Mixed Flow	82,000	8,200	1,822	2,000	E	N/A
NO BUILD 2036 Projected	4 Mixed Flow	121,161	12,116	2,692	2,000	F	834,165 VH delay
BUILD 2036 Projected	4 Mixed Flow + HOV	121,161	12,116	1,954	2,200	D	834,165 VH saved

Source The Department Traffic Report 2007

Note: Existing and No Build Facility accounts for four mixed flow lanes with a short section of three mixed flow lanes northbound between Bates Road and the U.S. 101 /SR 150 IC and an auxiliary lane within the same southbound section. In the Build scenario, the additional mixed flow lane would remain and the auxiliary lane would be converted to a mixed flow lane. HOV capacity used is 85% of maximum capacity of Mixed Flow lane (2000 VPHPL) or 1700 VPHPL.

For the projected year 2036, the peak month traffic and the peak hour demand is expected to increase 50 percent, respectively 121,161 vehicles (AADT) and 12,116 vehicles (peak hour volume). The expected VPHPL would be 2,692 vehicles and without any improvements to the facility, the highway would exceed the maximum design capacity. This would create LOS F conditions and would result in 834,165 vehicle hours of delay.

### Safety/Accident Data Analysis

Table 1.2-2 Selective Accident Rates, is a summary of actual traffic accidents rates versus average accident rates calculated per million vehicle miles (mvm) during a 36-month period between January 1, 2004 to December 31, 2006. This data was obtained from the Department's Traffic Accident Surveillance and Analysis System (TASAS).

**Table 1.1-2 Selective Accident Rate from 01/01/04 to 12/31/06**

LOCATION By County and Post Mile (PM/PM)		Total Acci- dents	Accident Rate					
			Actual			State Average		
			Fatal	Fatal+ Injury	TOTAL	Fatal	Fatal+ Injury	TOTAL
US 101	Ventura County (PM39.8/PM43.6)	192	0.004	0.23	0.71	0.022	0.37	0.82
US 101	Santa Barbara County (PM0.0/PM2.2)	115	0.000	0.27	0.77	0.011	0.27	0.71

Source The Department TASA Traffic System Network Report 2006



For Ventura County, the actual total 0.71 accident rate was less than the 0.82 state average rate and of the 194 reported accidents, the three primary causes for the accidents were speeding (36.6%), improper turns (33%) and the influence of alcohol (10.8%). The three primary types of collisions were rear ends (36.6%), hit objects (32.5%), and overturns (11.3%).

For Santa Barbara County, the actual total 0.77 accident rate was greater than the 0.71 state average rate and of the 119 reported accidents, the three primary causes for the accidents were speeding (46.2%), improper turns (20.2%), and the influence of alcohol (10.1%). The three primary types of collisions were rear ends (42%), hit objects (34.5%), and sideswipes (15.1%).

### **Operational Deficiency**

Congestion in this area may be attributed to several factors. A bottleneck is formed due to the reduction of the mainline cross section from eight lanes to six lanes to four lanes within various locations. Another factor is heavy traffic volume originating from the Oxnard, Ventura and Camarillo areas traveling north to Santa Barbara during morning peak hours and traveling south in afternoon peak hours. There is also heavy merging and weaving from lane drops that occur within various segments of the project area resulting in considerable delays for several hours in the morning and afternoon in each direction. If no capacity improvements are made, conditions would continue to deteriorate in the future from planned growth alone.

The median openings for left turns at Mussel Shoals, La Conchita and Tank Farm allow motorists to cross two lanes of opposing traffic to turn left to access La Conchita or Mussel Shoals and to re-enter the SB or NB highway which can be challenging. Implementation of the HOV lane would require closure of the medians which would also eliminate accidents caused by left turns through the medians. Lengthening the acceleration and deceleration lanes to these communities would improve access for vehicles exiting and entering the community from the highway.

At La Conchita, there is no direct access to the beach and pedestrians have been observed crossing the highway via the median to access the beach. Pedestrians crossing a high-speed facility is an undesirable movement which would be eliminated by closing the medians and providing a pedestrian undercrossing.

### **Legislation**

On November 7, 2006 California voters approved Proposition 1B, the Highway Safety, Traffic Congestion Relief, Air Quality, and Port Security Bond Act of 2006. The bond

includes \$4.5 billion to be deposited in the Corridor Mobility Improvement Account (CMIA). Based upon the recommendations from previous plans and studies, the Department, VCTC and SBCAG jointly nominated the Ventura/Santa Barbara 101 High Occupancy Vehicle project for CMIA funds to widen the project segment, improve traffic flow and safety and to construct the pedestrian undercrossing in the community of La Conchita to provide safe beach access. The project was allocated CMIA and Inter-regional Improvement Program (IIP) funds in the amount of \$151 million. The total amount programmed for the project (\$151.47 million) is made up of a mix of CMIA and IIP funding. The total CMIA funding programmed for the project is available only for capital construction and construction support. The remaining support costs for the project are currently programmed with IIP funding.

### **Independent Utility**

This project has independent utility because the proposed HOV lane would merge on the existing facility in Ventura County at the southern project limit. In addition, several transportation improvement projects have been proposed, approved, or are under construction within the City of Carpinteria and near by vicinity in Santa Barbara County that would link to the northern project limits. A proposed project in the City of Carpinteria would improve Linden Avenue and the Casitas Pass Interchange to allow for improved Level of Service. The Department's District 5 project began construction July 2008 and will improve U.S. 101 between Milpas Street and Hot Springs Road/Cabrillo Boulevard in Santa Barbara County. The project will include the reconstruction of two major interchanges, six new or improved bridges, freeway widening, and improvements to local streets and circulation. Some of the improvements would be completed and operational before commencement of the proposed project's construction; hence they would not contribute to impacts directly associated with the proposed project nor contribute to independent utility. In the interim, bottleneck conditions north of the proposed project may exist and would be addressed when other projects in the corridor are constructed after the completion of this project. This issue would be addressed as part of the project's Traffic Management Plan.

### **1.1.3 Related Projects**

U.S. 101 Operational Improvements from Milpas to Hot Springs (2.0 miles), this project adds lanes NB and SB on the U.S. 101 between Cabrillo Road and Milpas Street in the City of Santa Barbara and includes local road improvements and bicycle and pedestrian enhancements. Construction began July 2008.



South Coast 101 HOV (10.3 miles) This project proposes to add median HOV lanes in both directions on U.S. 101 from 0.4 miles north of Bailard Avenue in the City of Carpinteria to 0.5 miles south of Milpas Street in the City of Santa Barbara – Public circulation of draft environmental document – Spring 2011.

Linden to Casitas Pass Interchanges (1.1 miles), this project includes reconstruction of interchanges, replacement of Carpinteria Creek Bridge, and provides a new Via Real connection south to Bailard Avenue. Public circulation of draft environmental document – Fall 2008.

Santa Barbara 101 TMS South. This SHOPP project proposes to provide Intelligent Transportation System (ITS) vehicle detectors on U.S. 101 in Santa Barbara County in two phases between the SB/VEN County Line (PM 0.0) and Winchester Canyon Road in the City of Goleta. The primary objective of this project is to capture traffic speed and volume information to effectively monitor and manage the freeway. When fully implemented and integrated with the District Transportation Management Center (TMC) the project would also provide real-time traffic information to the traveling public.

Ventura U.S. 101 (PM 41.3/42.1) Proposes to replace drainage culverts at Punta Gorda Undercrossing/Rincon Point. This project is in the project initiation phase.

Ventura U.S. 101 (PM 29.9/30.0) This is a locally funded project with The Department's oversight to modify off-ramps at California Street in the City of San Buenaventura. This project is in Project Approval/Environmental Document (PA/ED) phase.

Ventura U.S. 101 (PM22.0/23.7) This is a landscape mitigation project near the City of Oxnard from SR 232 to Johnson Drive. The project is under construction.

## **1.2 Project Description**

The proposed project is 6 miles in length between the Mobil Pier Undercrossing in Ventura County and Casitas Pass Road in Santa Barbara County. Within the limits of the proposed project, U.S. 101 is a freeway/expressway with four 12-foot lanes and variable width median, inside, and outside shoulders. The primary purpose of the project is to improve mobility by reducing existing and forecasted traffic congestion on the U.S. 101 within the project limits by construction of an HOV lane in each direction to provide six lanes, three in each direction.

### **1.2.1 Alternatives**

This section describes the proposed action and the design alternatives that were developed by a multidisciplinary team to achieve the project purpose and need while avoiding or minimizing environmental impacts. The alternatives considered are the NO BUILD Alternative, the MINIMUM BUILD Alternative, and the FULL BUILD Alternative. After the public circulation period, all comments will be considered, and the Department will select a preferred alternative and make the final determination of the project's effect on the environment. In accordance with CEQA, if no unmitigable significant adverse impacts are identified, the Department will prepare a Negative Declaration (ND) or Mitigated ND. Similarly, if the Department, as assigned by FHWA, determines the NEPA action does not significantly affect the environment, the Department will issue a Finding of No Significant Impact (FONSI) in accordance with NEPA.

### **1.2.2 NO BUILD Alternative**

The NO BUILD alternative provides a baseline for comparing the impacts associated with the alternatives. The infrastructure in the project area would remain as it now exists and congested conditions would continue to deteriorate. The NO BUILD alternative would not result in any foreseeable adverse environmental impacts; however, this alternative would not be consistent with Ventura and Santa Barbara County Congestion Management Plans and the 101 In Motion Plan which recommended adding lanes and implementing HOV lanes or the long-term objective of improving traffic congestion because it would not improve the efficient movement of goods and services in the vicinity of the project area.

### **1.2.3 MINIMUM BUILD Alternative**

The MINIMUM BUILD Alternative includes the following project features:

- Construction of a 12-foot NB and SB High Occupancy Vehicle (HOV) Lane in the existing median area from U.S. 101 (PM 39.8) in Ventura County to US 101 (PM 2.2) in Santa Barbara County.
- Implementation of varying shoulder widths that could include sections with a minimum of 2-foot wide inside shoulders and a minimum of 7-foot wide outside shoulders.
- Closure of existing median openings at Mussel Shoals (PM 40.9), La Conchita (PM 41.4), and Tank Farm (PM 42.2).

- Installation of Intelligent Transportation Systems (ITS), vehicle detectors, and Closed Circuit TV (CCTV) and a changeable message sign near Bates Road.
- Removal and replacement of three beam barriers with concrete barriers and construction of additional concrete barriers as needed.
- Installation of soundwalls and retaining walls as feasible.
- Convert existing lanes located near the U.S. 101/150 Interchange to accommodate the proposed HOV lane if necessary.
- No new right of way acquisition would be required for the proposed improvements.

The design includes deviations from mandatory and advisory design standards for shoulder width, horizontal and vertical clearances contained in the Highway Design Manual (HDM).

#### **1.2.4 FULL BUILD Alternative**

The FULL BUILD Alternative includes the following project features:

- Construction of a 12-foot NB and SB High Occupancy Vehicle (HOV) Lane in the existing median area from U.S. 101 (PM 39.8) in Ventura County to US 101 (PM 2.2) in Santa Barbara County.
- Implementation of 10-foot wide inside shoulders and a minimum of 10-foot wide outside shoulders. Four bridge structures within the project limits would be widened to accommodate the full standard shoulders
- Closure of existing median openings at Mussel Shoals (PM 40.9), La Conchita (PM 41.4), and Tank Farm (PM 42.2).
- Installation of Intelligent Transportation Systems (ITS), vehicle detectors, and Closed Circuit TV (CCTV) as needed and changeable message sign (CMS) near Bates Road.
- Removal and replacement of three beam barriers with concrete barriers and construction of concrete barriers as needed.
- Installation of soundwalls and retaining walls as feasible.
- Convert lanes located near the U.S. 101/150 Interchange to accommodate the proposed High Occupancy Vehicle lane if necessary.
- Additional right-of-way acquisition would be required.

This alternative complies with the HDM Mandatory Design Standards.

Figure 1.2-2 on the next page, illustrates Typical Cross Sections of the proposed alternatives for the roadway section from Mussel Shoals to Bates Road.

### **1.2.5 DESIGN OPTIONS - Build Alternatives**

The following design options would be considered for the MINIMUM BUILD and FULL BUILD Alternatives.

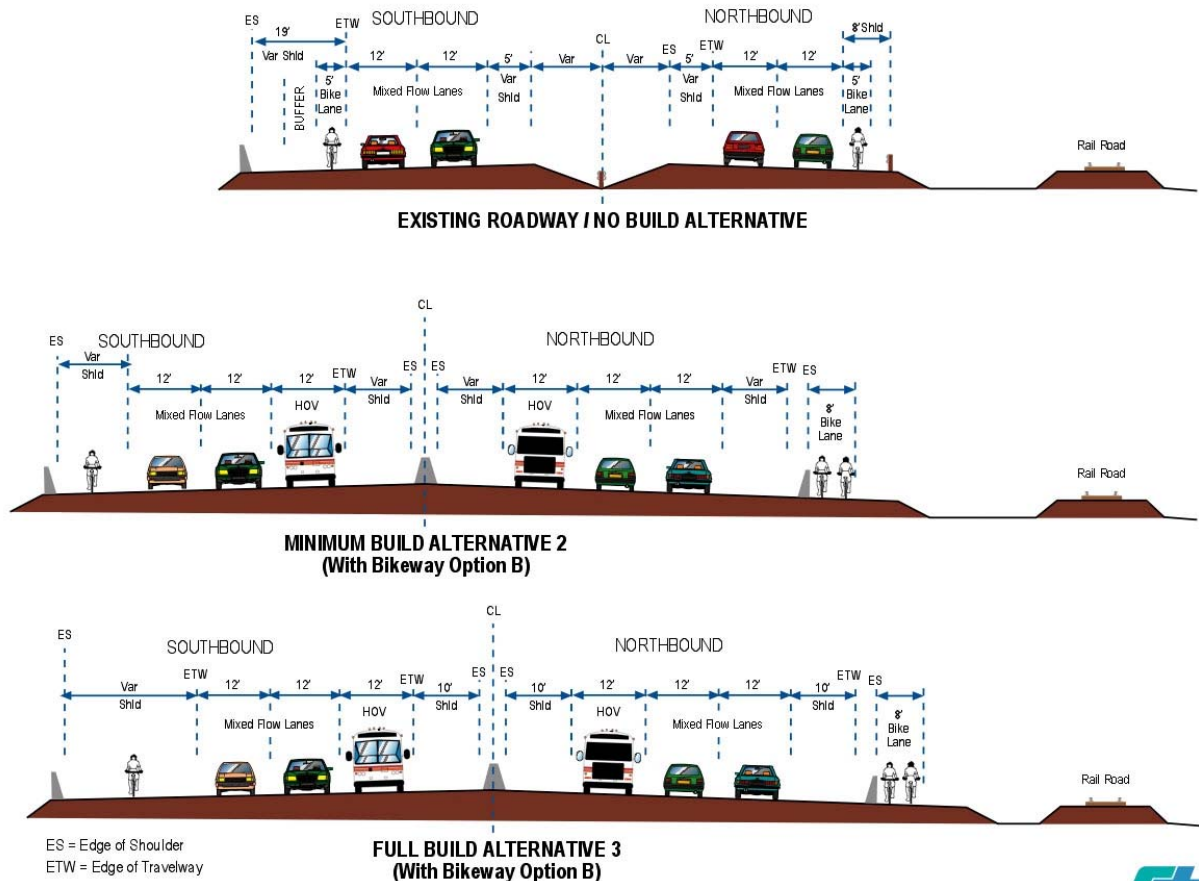
#### **Part-Time HOV**

This option would administratively implement a part-time HOV lane in both directions within the proposed project limits. The HOV lane would be open to single-occupant vehicles during off-peak hours. Signage would be installed to inform motorists of the hours of operation. The HOV lane would have continuous ingress/egress striping to allow access.

#### **Bikeway Design Options**

- Option A no change to the existing bikeways within the project limits.
- Option B would provide an 8-foot Class I bikeway in the NB direction from Mussel Shoals to the Bates Road Interchange. The bikeway would be separated from traffic by a concrete barrier with a fence on top of the barrier. To accommodate the new 8-foot Class I bikeway in the NB direction within the existing pavement and/or State right-of-way, the highway centerline would be realigned towards the SB direction. The existing signage and bikeway designation on the SB roadway pavement for the Class II bikeway would be removed for a wider shoulder for emergency parking. Option B would provide a completely separated two-way bikeway adjacent to the NB roadway and cyclists would not be prohibited from using the wider SB shoulder. A SB Class II bikeway would begin at the U.S. 101/SR 150 interchange and end at the Seacliff off-ramp.

# US 101 VEN/SB HOV PROJECT Typical Cross Sections



Source: The Department 2008

**Figure 1.2-1 Typical Cross-Sections (between Mussel Shoals and Bates Road)**

## Pedestrian Undercrossing Design Options

The proposed pedestrian undercrossing (PUC) at the intersection of Bakersfield Avenue and Surfside in La Conchita has already undergone environmental approval (SCH#2002031013) and was approved in 2002. Although construction of the PUC would take place concurrently with the proposed project, it is not considered an actual component of the proposed project. However, since 2002, other location and design options are being considered.

PUC 1 – Proposed design would be near the intersection of Bakersfield Avenue and Surfside Street and would span from the beach to just before Surfside Street. This design has already undergone environmental review and approval in 2002. This option requires

Union Pacific Railroad and Ventura County right-of-way/land acquisition and Public Utility Commission approval. Currently, funding for land acquisition is not available.

PUC-2 – Proposed designs (north and south of Santa Barbara Avenue) would be near the intersection of Surfside Street and Santa Barbara Avenue. These designs would span from the beach to just before the Railroad Tracks within state right-of-way. These options would not require land acquisition from the Railroad or Ventura County, but would require Public Utility Commission approval.

### **1.2.6 TRANSPORTATION SYSTEMS MANAGEMENT AND TRANSPORTATION DEMAND MANAGEMENT OPTION**

Transportation System Management (TSM) strategies consist of actions that would increase the efficiency of existing facilities by increasing the number of through trips a facility can carry without increasing the number of through lanes. At this time, the project area does not meet the criteria for a TSM program because population in the project area is less than 200,000. TSM programs also encourage automobile, public and private transit, ridesharing programs, and bicycle and pedestrian improvements.

#### ***Transportation Systems Management***

This option would incorporate implementation of traffic systems management (TSM) measures such as ramp metering, auxiliary lanes, turning lanes, and traffic signal coordination. The U.S. 101 is the primary transportation corridor connecting northern Ventura county with Carpinteria and Southern Santa Barbara County and has heavy commuter traffic. The U.S. 101 amounts to approximately 70% of the study corridor and is a geographically constrained area, bounded by the Pacific Ocean and by mountainous terrain. There are no alternate routes until the City of Carpinteria. TSM measures may include freeway acceleration lanes, enhanced transit service through the U.S.101 corridor, and isolated intersection improvements.

#### ***Transportation Demand Management***

For Santa Barbara County, options such as SBCAG's Curb Your Commute would be considered for this project and would be incorporated into the Traffic Management Plan for this project if feasible. Curb Your Commute includes incentives, programs and services for commuters and employers designed to shift commuting to off peak hours, increase carpooling and vanpooling, and increase bus service levels for the Coastal Express 101.

### 1.2.7 Permits and Approvals Needed

The proposed project would require permits from different federal, state and local agencies which would vary depending on the alternative selected. The following Table 1.5-1 list the types of permits required, agencies involved, and which build alternative requires the permit.

**Table 1.2-1 Required Permits for the Proposed Project**

	Agency	Permit/Approval	Status
<b>FULL/MINIMUM BUILD</b>	Ventura County	Coastal Development Permit (CDP)	2 permits required, one for HOV and one for the PUC -anticipated submittal after final environmental document distribution and during design phase
	Santa Barbara County	Coastal Development Permit	Anticipated submittal after final environmental document distribution and during design phase
	City of Carpinteria	Coastal Development Permit	Anticipated submittal after final environmental document distribution and during design phase
	Union Pacific RR	Encroachment Permit	Temporary Construction Easement
	State lands	Encroachment Permit	Acquisition agreement has not been finalized therefore The Department currently owns the land.
<b>FULL BUILD ONLY</b>	California Regional Water Quality Control Board	401 Certification	Anticipated submittal after final environmental document distribution and during design phase
	United States Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the U.S.	Anticipated submittal after final environmental document distribution and during design phase
	California Department of Fish and Game	1602 Agreement for Streambed Alteration	Anticipated submittal after final environmental document distribution and during design phase
	State lands	Encroachment Permit	Acquisition agreement has not been finalized therefore The Department currently owns the land.

Due to the proximity of the proposed project, a Coastal Development Permit would be required for both build alternatives. The culvert extensions for the FULL BUILD Alternative may have both permanent and temporary impacts to jurisdictional waters of the U.S. This work would require permits under section 404 and 401 of the Clean Water Act and Streambed Alteration Agreement under Section 1602 of the California Department of Fish and Game code.





## Chapter 2 Affected Environment, Environmental Consequences, and Mitigation Measures

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This chapter explains the impacts that the project would have on the human, physical, and biological environments within the project and surrounding areas. It describes the existing environment that could be affected by the project, potential impacts from each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures. Any indirect impacts are included in the general impacts analysis and discussions.

As part of the scoping and environmental analysis conducted, the following environmental issues were considered but no adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document.

- Wild and Scenic Rivers. The project site contains no Wild and Scenic Rivers.
- Timberlands. The project site contains no Timberlands.
- Community Impacts. No relocations would be required for the proposed project.
- Natural communities were not found to present within the project boundaries.
- Threatened and Endangered Species are not present within the project limits.

Environmental impacts and mitigation measures reported in this Initial Study/Environmental Assessment were based on technical studies conducted for this project. The studies are listed after the Table of Contents on page vi and are available for review at:

- The Department's Dist. 7, 100 South Main Street, Los Angeles, California 90012.
- Carpinteria Public Library, 5141 Carpinteria Avenue, Carpinteria, CA 93013
- Carpinteria City Hall, 5775 Carpinteria Avenue, Carpinteria, CA 93013

## 2.0 HUMAN ENVIRONMENT

### 2.1.1 Existing and Future Land Use

#### Regulatory Setting

##### Santa Barbara County Comprehensive Plan, 1980

The Santa Barbara County Comprehensive Plan is an officially adopted statement of local policy concerning the County's long-term development. The Comprehensive Plan

contains goals, objectives, and action plans which guide development within the unincorporated areas of the County. The Comprehensive Plan contains all the required elements and serves as “an effective guide for orderly growth and development, preservation and conservation of open-space land and natural resources, and the efficient expenditure of public funds relating to the subjects addressed in the general plan.”

**Ventura County General Plan, 2005**

The Ventura County General Plan is an officially adopted statement of local policy concerning the County’s long-term development. The General Plan contains goals, policies, and programs which guide development within the unincorporated areas of the County. The General Plan contains all the required elements.

**City of Carpinteria General Plan, 2003**

The City of Carpinteria General Plan is the primary planning policy document for the City. The General Plan contains objectives, policies, and implementation strategies to guide development within the City. The General Plan contains all the required elements. According to the General Plan, the goal of the community is “to preserve the essential character of our small beach town, its family-oriented residential neighborhoods, its unique visual and natural resources, and its open, rural surroundings while enhancing recreational, cultural, and economic opportunities for our citizens.”

***Coastal Plans for Santa Barbara Co, Ventura Co and the City of Carpinteria***

Please refer to the discussion in Section 2.1.3 Coastal Zone.

**Affected Environment**

Portions of southern Santa Barbara and northern Ventura counties inland of U.S. 101 are comprised primarily of open space (18,309 acres) or agricultural uses (including orchards, vineyards, nurseries, row crops, pasture, and range) (3,504 acres). Many of these areas are designated preserve lands or areas devoted to plants and animal production for commercial purposes, and for other compatible uses. Oil wells and related industrial facilities are also present along coastal portions of the study area. Residential development within the study area (1,159 acres) consists of smaller beach communities, rural residential, as well as a number of mobile home parks, single family, and multi-family developments located in the southern area of Carpinteria.

Within the study area, Santa Barbara County is characterized by a greater proportion of developed areas (1,452 acres including commercial, industrial, public services, and residential), with fewer acres of agricultural use (1,353 acres). Conversely, the portion of Ventura County within the study area is characterized primarily by open space and/or

recreational uses (18,050 acres) with agricultural uses (2,151 acres). Residential land uses are sparse in the Ventura County portion of the study area at 191 acres. Specific land uses within each affected community are identified below.

**Southern Area of Carpinteria & Unincorporated portions of Santa Barbara County**

The first families arrived in Carpinteria during the 1840s, although the town was not established until 1887. Historically, agriculture in the area supported crops such as lima beans, walnuts, and avocados. The area retains some of its agricultural uses, especially through citrus orchards and commercial flower gardens; however, development within the City has decreased the amount of land available for such uses.

The area is characterized by a number of business parks as well as industrial uses such as oil and natural gas facilities. Light industrial processing, assembly, packaging, wholesale, and service-related industries are supported here. Specifically, petroleum extraction and natural gas processing (Venoco Oil and Gas Facility, Carpinteria plant) as well as high technology firms (including research and development firms) are present. Open space and recreational areas for residents and visitors include Carpinteria Beach State Park, the Carpinteria Bluffs Nature Preserve, Viola Fields (which support playing fields), Monte Vista Park, Tee Time driving range, and the Thunderbowl roller skating rink. Public services include the Carpinteria Library, Carpinteria Middle School, as well as City Hall. Residential areas consist of single family residential, multi-family residential, and mobile home parks.

Commercial uses within the City of Carpinteria, west of the southern area of Carpinteria, provide daily services to residents and visitors. A mixture of retail, wholesale, service, and office uses are typically located along transportation corridors such as Carpinteria Avenue and provide both visitor-serving and local resident uses including neighborhood retail and grocery services.

According to the City of Carpinteria General Plan Land Use Element, there are few remaining areas within the City where development of housing can occur without conflicting with policies aimed at protecting coastal resources. Moreover, most of the City's undeveloped land is not designated for residential uses. The majority of new development would occur in the commercial and industrial sector, as most of the currently undeveloped areas are designated as such. However, land use and zoning standards are flexible to allow residential development within a mixed-use setting within general commercial and industrial areas (Objective LU-6). Furthermore, the City of Carpinteria General Plan Community Design Element identifies that the Northeast subarea, which contains a portion of the study area, provides more opportunities for new development than other areas. Some additional residential buildout is expected to occur

within areas designated for multi-family use. Figure 2.1-1 illustrates the land uses of this community and the surrounding area.

### **Rincon Area**

Rincon Point is a gated residential community that straddles two counties on the southside of U.S. 101. The County line is defined by Rincon Creek. According to the Ventura County Coastal Area Plan, Rincon Point is “a 9.4 acre residential area with controlled access. It is zoned “C-R-1” (Coastal One-Family Residential, 7,000 square foot minimum lot size).” It is bordered by Rincon Beach Park along the coast, which boasts world-class surf conditions. Parking is available both west and east of Rincon Point Road for visitors and park users. Aside from residents, the primary user group of this area is surfers, and the area is a popular recreation spot. Beach access to Rincon Beach Park is provided via a walkway to the south of Rincon Point or via stairs to the north of Rincon Point.

The area north of U.S. 101 is characterized by low-density residential and agricultural uses within Santa Barbara County, whereas within Ventura County, uses north of U.S. 101 are primarily open space or sparsely populated agricultural uses with equestrian facilities. Given the residences’ orientation toward the ocean, as well as expansive mature vegetation, views of U.S. 101 are not available from Rincon Point. Some of the south-facing rural residences along Bates Road can be seen clearly heading north of U.S. 101, which indicates the residences also have views of U.S. 101.

Major employment centers are located outside of this area; the nearest commercial services are located in Carpinteria, approximately 2.3 miles north of the Rincon area, and accessible via U.S. 101 and SR192. These services include neighborhood retail and grocery services.

### **La Conchita**

La Conchita is a tightly-knit residential community located on the east side of U.S. 101, between Rincon Point and Mussel Shoals in unincorporated Ventura County. Known originally as La Conchita del Mar, this area was first subdivided in 1923. The community experienced two major landslides, in 1995 and 2005. The first major landslide destroyed nine homes, although no lives were lost. The second landslide destroyed an additional ten homes, damaged five, and caused ten deaths/casualties.

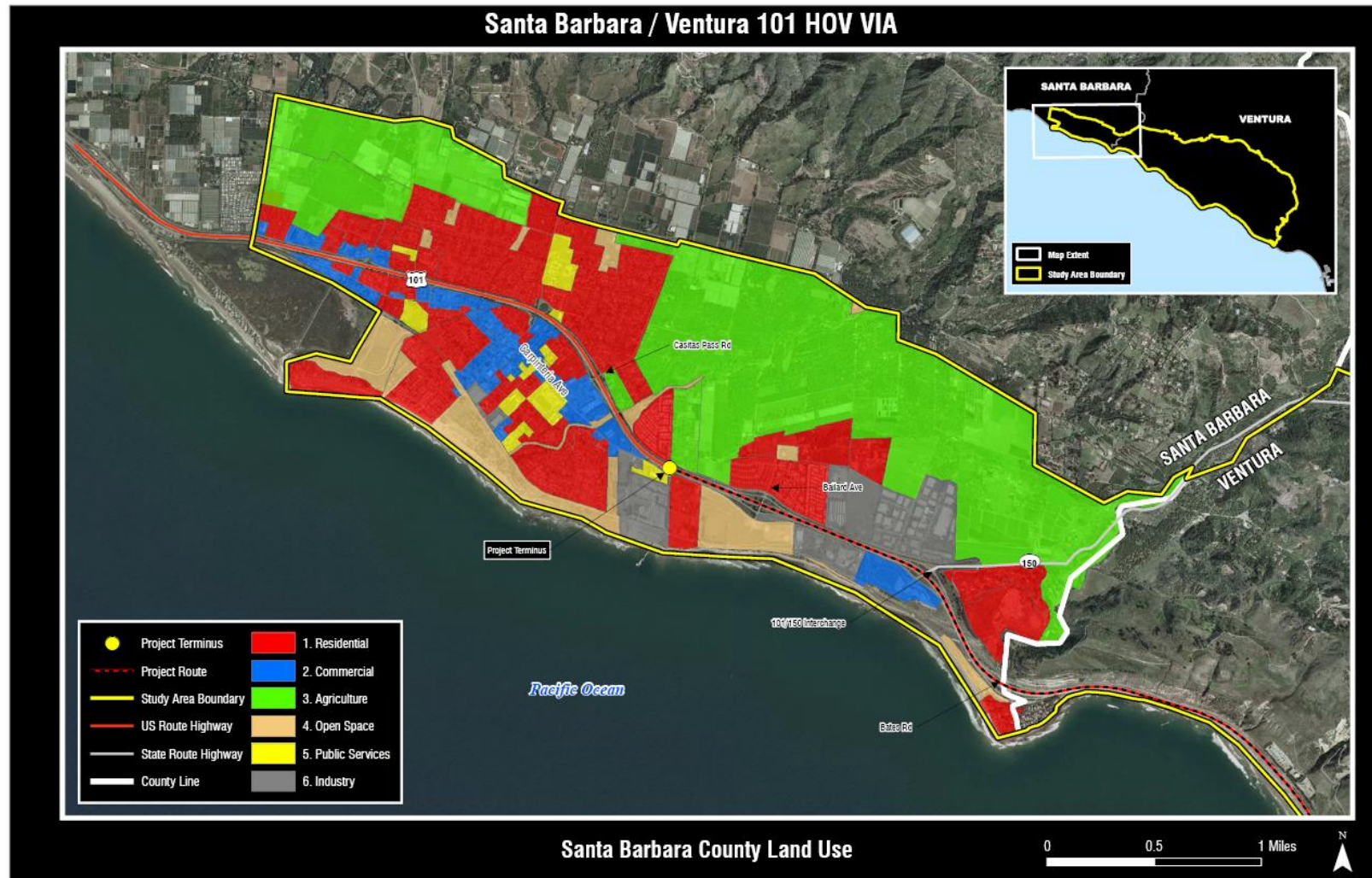


Figure 2.1-1 Study Area Land Use in Santa Barbara County



Subsequently, the area was federally classified as a geologic hazard area.

According to the Ventura County Coastal Area Plan, La Conchita is “an older residential community, about two miles south of the Santa Barbara-Ventura County Line, east of U.S. Highway 101, that encompasses 19.0 acres and is zoned “R-B” (Residential-Beach) and “C-C” (Coastal Commercial).” A gas station and convenience store is located at the corner of Surfside Avenue and Santa Barbara Avenue, however, it is not currently operational. A produce stand is situated on railroad right-of-way, near Santa Barbara Avenue that provides residents and visitors with fresh produce daily. On the plateau of Rincon Mountain, sparsely populated agricultural and open space uses are present. To the northwest of La Conchita, avocados are being cultivated. Farther northwest is the 9.8-acre Phillips Petroleum La Conchita Oil and Gas Processing Facility (Tank Farm) which is no longer active. Agricultural uses and livestock are located immediately adjacent to La Conchita.

Recreational opportunities within this community are primarily provided by the beach. While not intended for this purpose, beach users currently utilize a Department maintained drainage tunnel, located between Oxnard Avenue and Sunland Avenue, for beach access. The landscaping near the culvert is maintained by the community. In addition, parking is available along Surfside Avenue. Figure 2.1-2 illustrates the land uses of this community and the surrounding area.

Major employment centers are located outside of this area, the nearest commercial services are located in Carpinteria, approximately 4.3 miles north of La Conchita, and accessible only via U.S. 101. These services include neighborhood retail and grocery services.

### **Mussel Shoals**

The least populated of the communities within the study area, Mussel Shoals is composed of mostly larger single-family residences and the Cliff House Inn, a 24-room hotel and attached restaurant, established in 1923. In 1924, Mussel Shoals was subdivided into 66 lots. In 1956-7, the Richland Oil Company built an island off Mussel Shoals for oil drilling. According to the Ventura County Coastal Area Plan, Mussel Shoals is “a 5.6-acre mixed-density residential area. It is located west of U.S. Highway 101 and the Old Coast Highway, and is zoned “R-B” (Residential Beach” and “C-C” (Coastal Commercial).” The community is connected via two main streets, Old Pacific Coast Highway and Old Rincon Highway/Breakers Way and Ocean Avenue. A homeowners association covers the residences along the north side of Breakers Way. Rincon Island,

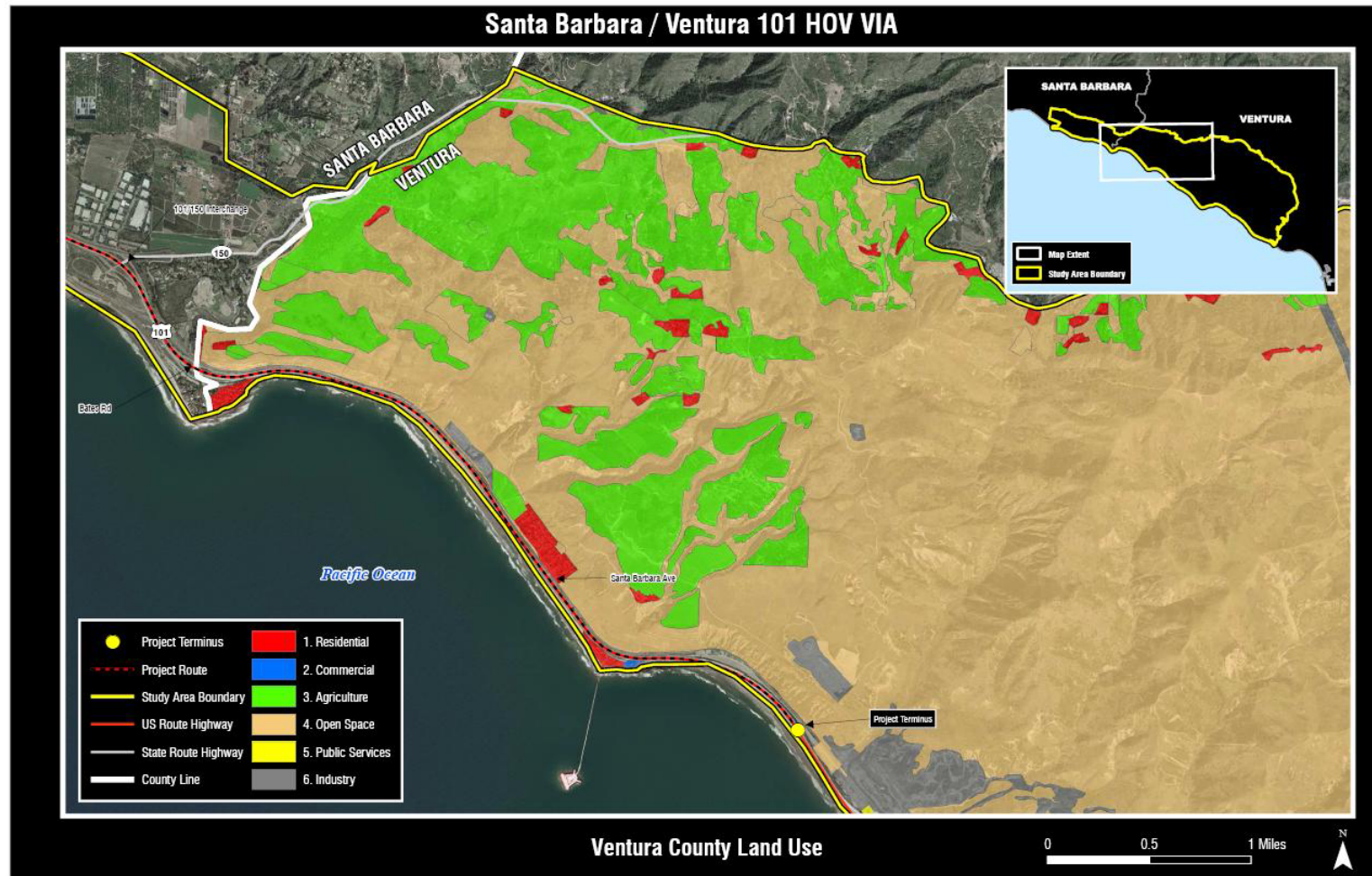


Figure 2.1-2 Study Area Land Use in Ventura County

an artificial island constructed for well drilling and oil and gas production, is connected to the shore by Richfield Pier, extending from the southernmost point of this area. North of U.S. 101, sparsely populated agricultural and open space uses are present. The Mobil Rincon Onshore Facility is located south of Mussel Shoals. Recreational opportunities within this community are primarily provided by the beach. Specifically, surfers come to the area for the popular ‘Little Rincon’ surfing destination. Stairs are provided along the coast on the west side of Ocean Avenue, which are easily accessible to residents north of the community. For visitors and residents, rocky beach access is available from Ocean Avenue.

With the exception of a restaurant and the Cliff House Inn, no commercial services are located within Mussel Shoals. Major employment centers are located outside of this area, the nearest commercial services are located in Carpinteria, approximately 4.8 miles north of Mussel Shoals, and accessible only via U.S. 101. These services include neighborhood retail and grocery services.

#### **Ventura County Future Development**

Future development is limited within Ventura County. According to the Ventura County Coastal Area Plan, land divisions outside of existing developed areas are permitted only where 50 percent of the usable parcels in the area have been developed (California Coastal Act, Section 30250(a)). According to the Ventura County Coastal Area Plan, residential development within the study area will occur mainly within the existing communities of Rincon Point, La Conchita, and Mussel Shoals in accordance with the Ventura County General Plan and existing zoning designations. The Coastal Area Plan identifies that more commercial development within La Conchita and Mussel Shoals is not necessary. However, new development in the Open Space or Agriculture designated areas could also occur. In addition, the Mobil Rincon Onshore Facility, located south of Mussel Shoals, is located within a 395-acre industrial zoned area with 158 acres still potentially developable. Therefore, it is likely that future industrial development could occur within this area.

Table 2.1-1 lists currently proposed developments for the Study Area with information from the City of Carpinteria Community Development Department, the Ventura County Planning Department, and the Santa Barbara County Planning Department.

### **Environmental Consequences**

#### ***NO BUILD Alternative***

Under the NO BUILD Alternative, existing conditions would remain and no impacts to existing and future land uses would occur. However, existing congestion along U.S. 101



would not be alleviated, projected growth in the area would not be accommodated, and safety would not be improved along the roadway with implementation of the NO BUILD Alternative.

**Table 2.1-1 Current Proposed Developments**

Project	Jurisdiction	Proposed Uses	Address	Project Status
BEGA Warehouse	City of Carpinteria	This project includes construction of 4000 SF warehouse	1000 Bega Way	D
Green Heron Spring		Approved project proposes demolition of exist. structure and construction of 30 new condominiums	1300 & 1326 Cravens Lane	P
Lagunitas Mixed Use Development		Mixed-use project of 85,000 SF office space and 73 residential units (73 single-family & 36 three-plex units)	6380 Via Real	C
Lavender Court		Approved mixed-use with 40 condominiums and 4,672 SF commercial space.	4646 Carpinteria Avenue	B
Mission Terrace		Approved 27-unit housing project, includes 24 market rate single-family units and 3 affordable single-family units.	1497 Linden Avenue	C
Venoco's Paredon		Application for expansion of it's facility through the establishment of on-shore directional drilling operation (Initial state of submittal).	5731 Carpinteria Avenue	P
Coral Casino Project	Santa Barbara County	Revision to Development Plan to include modifications and additions to Coral Casino Beach & Cabana Club and the Four Seasons Biltmore.	1291 and 1260 Channel Drive	B
Miramar Hotel		Demolition of existing structures and the addition of 397,925 SF of structural development including a new restaurant, ballroom, spa, lobby, guestrooms, retail stores and beach & tennis club.	1555 South Jameson Lane	P

*Status Definitions:*

*P = Programmed (the environmental review has begun on the project but not approved, yet)*

*D = Design (the environmental review is completed but construction has not started).*

*C = Construction (as of this document, project is under constructions.*

*B = Build-out (the project is fully constructed to build-out conditions.*

**BUILD Alternatives**

At the community level, most of the proposed project improvements would occur within existing right-of-way, with minimal additional right-of-way. However, this action would not open any new areas to development. No changes to existing or proposed land uses and/or density would occur as a result of the proposed project. None of the areas within the study area identified for future development would be made directly more accessible with implementation of the proposed project.

## **Avoidance, Minimization and/or Mitigation Measures**

Because none of the proposed BUILD alternatives would result in substantial adverse land use impacts, no avoidance, minimization, and/or mitigation measures are required. However, the communities of Mussel Shoals and La Conchita would not be used for construction staging. A Traffic Management Plan (TMP) would be developed which would indicate staging areas.

### **2.1.2 Consistency with State, Regional, and Local Plans**

#### **Affected Environment**

##### ***State Transportation Improvement Program (STIP)***

In accordance with Government Code 14520 et. seq., the STIP is a statewide program of transportation projects which governs the expenditure of state revenues for transportation. The STIP includes projects from regional agencies that are included in the RTIP, and projects nominated by the Department. Projects from this plan are included for programming in the STIP's Interregional Improvement Program (IIP). U.S. 101 in Santa Barbara County is termed both a High Emphasis and a Focus Route for the purpose of programming state funding for interregional projects in the STIP's IIP.

##### ***2007 Federal Transportation Improvement Program, (FTIP)***

The Santa Barbara County Association of Governments (SBCAG) and Southern California Association of Governments (SCAG) prepared this multi-year Federal Transportation Improvement Program (FTIP) in accordance with Title 23 of the U.S. Code. The FTIP serves as a short-term program for the use of anticipated federal transportation funds to maintain, operate, and improve the region's multi-modal circulation system. The FTIP identifies all federally funded highway, transit, and other surface transportation projects in the County that are scheduled for implementation and regionally significant plans even if they are not federally funded. Projects in the FTIP are identified in SBCAG's adopted Regional Transportation Plan (RTP) or are consistent with the RTP's goals, policies, and objectives. The 101 in Motion South Coast Congestion Study, U.S. Highway 101 Improvement Program, is included within the 2007 FTIP.

##### ***South Coast Highway 101 Deficiency Plan, 2002***

The deficiency plan was developed due to congestion along U.S. 101. It was prepared by SBCAG in cooperation with the County of Santa Barbara, and the cities of Santa Barbara and Carpinteria. The Plan includes an analysis of the cause of the deficiency, the characteristics of the travel demand impacting the deficient facility, an action list of short-term improvements that will improve the deficiency, and an implementation

schedule. This plan recognizes the multitude of both short-term and long-term plans to improve U.S. 101 along the South Coast but focuses on improvements within Santa Barbara County, including widening of U.S. 101 between Milpas Street and the Ventura County line to six lanes with the provision of either an HOV lane in both directions or a reversible HOV/High-Occupancy Toll (HOT) lane within the freeway median.

***101 In Motion Final Report, 2006***

The SBCAG 101 In Motion is a deficiency plan that addresses the long-term improvements to the U.S. 101 corridor necessary to reduce congestion. The final adopted consensus package included the addition of a carpool/HOV lane in both directions south of Milpas Street to the Ventura County line. The widening of the existing two-lane section of U.S. 101 from the County line north to the Cabrillo/Hot Springs Road interchange would add one carpool lane in each direction.

***Santa Barbara County Association of Governments (SBCAG) Metropolitan Transportation Plan (MTP) 2000-2030, 2004***

The preferred strategy of the plan is to avoid widening U.S. 101; however, it has been recognized that trends such as forecast growth and longer trip lengths indicate the public's preference for automobile transport. Therefore, a program of travel demand management, development of alternative modes of transportation, and selective capacity expansion projects has been developed. The MTP regional transportation improvement strategy emphasizes implementation of U.S. 101 operational improvements including the addition of mixed flow lanes and HOV lanes.

***Regional Transportation Improvement Program (RTIP) - Santa Barbara County, 2006***

A project programmed with Regional Improvement Program funding in the RTIP is the widening of U.S. 101 south of Milpas Street in the City of Santa Barbara to the Ventura County line. A recommendation was approved in October 2003 by SBCAG that included widening of the existing four-lane highway to six lanes. Therefore, the proposed project is consistent with the RTIP for Santa Barbara County.

***Southern California Association of Governments (SCAG) Destination 2030: 2004 Regional Transportation Plan (RTP), 2004***

The most recent adopted RTP was adopted in April 2004. A project was included in the RTP that proposed an interchange improvement along U.S. 101 from La Conchita to Mussel Shoals. Widening of U.S. 101 within existing rights-of-way is also proposed. Therefore, the project is consistent with the goals of the SCAG RTP.

***Santa Barbara County Comprehensive Plan, 1980***

Please refer to the discussion in Section 2.1.1. Existing and Future Land Use

***City of Carpinteria General Plan, 2003***

Please refer to the discussion in Section 2.1.1. Existing and Future Land Use

**Environmental Consequences**

***NO BUILD Alternative***

Under the NO BUILD Alternative, existing conditions would remain which would be inconsistent with existing transportation plans which call for the improvement of U.S. 101. Existing congestion along U.S. 101 would not be alleviated, projected growth in the area would not be accommodated, and safety would not be improved along the roadway with implementation of the NO BUILD alternative. This alternatives would be inconsistent with existing transportation plans which call for the widening of U.S. 101.

***BUILD Alternatives***

Implementation of the proposed project would occur within existing right-of-way MINIMUM BUILD, with only minimal, additional right-of-way acquired for the FULL BUILD alternative. No changes to existing or proposed land uses would occur as a result of the proposed project.

The transportation plans outlined above, including the 2007 Federal Transportation Improvement Program, South Coast Highway 101 Deficiency Plan, 101 In Motion Final Report, STIP, SBCAG MTP, RTIP for Santa Barbara County, and SCAG RTP specify the need for and support improvement to U.S. 101. Specifically, widening of U.S. 101 to six lanes is included within each plan. The proposed project would widen the portion of U.S. 101 within the project area to six lanes, consistent with the transportation plans.

The Santa Barbara County Comprehensive Plan and City of Carpinteria General Plan do not include specific policies relating to U.S. 101 within their plans; however, the project would not conflict with any general policies relating to land use. No changes to existing or proposed land uses would occur. Therefore, the proposed project would not conflict with the Santa Barbara County Comprehensive Plan or City of Carpinteria General Plan. In contrast, the Ventura County General Plan includes widening of U.S. 101 up to six lanes. The proposed project would widen the portion of U.S. 101 within the project area to six lanes, consistent with the Ventura County General Plan. Therefore, implementation of the proposed project would not conflict with the Ventura County General Plan.

A Coastal Development Permit would be required for the proposed project improvements. No additional regional impacts or community level impacts are anticipated.

### **Avoidance, Minimization and/or Mitigation Measures**

Because none of the proposed BUILD alternatives would conflict with local land use plans, no avoidance, minimization, and/or mitigation measures are required.

## **2.1.3 Coastal Zone**

### **Regulatory Setting**

The Coastal Zone Management Act of 1972 (CZMA) is the primary federal law enacted to preserve and protect coastal resources. The CZMA sets up a program under which coastal states are encouraged to develop coastal management programs. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a coastal zone management plan and has enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established by the California Coastal Act are similar to those for the CZMA; they include the protection and expansion of public access and recreation, the protection, enhancement and restoration of environmentally sensitive areas, protection of agricultural lands, the protection of scenic beauty, and the protection of property and life from coastal hazards. The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

Just as the federal CZMA delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments (15 coastal counties and 58 cities) to enact their own local coastal programs (LCPs). LCPs determine the short- and long-term use of coastal resources in their jurisdiction consistent with the California Coastal Act goals. A federal consistency determination may be needed as well.

### **Santa Barbara County Coastal Plan, 1981**

Pursuant to Public Resources Code Section 30500 of the California Coastal Act of 1976, Santa Barbara County is required to prepare a local coastal program for the portion of the unincorporated area of the County within the Coastal Zone. As part of the local coastal program, the Santa Barbara County Coastal Land Use Plan (LUP) is a separate element of the County's Comprehensive Plan. The purpose of the Land Use Plan is to protect

coastal resources, provide greater access and recreational opportunities for the public's enjoyment, and allow for orderly and well-planned urban development and the siting of coastal-dependent and coastal related industry. The Plan proposes that firm urban-rural boundaries be established which will have the impact of redirecting growth from an outward expansion to redevelopment.

**Ventura County General Plan, Coastal Area Plan, 2001**

As with Santa Barbara County, Ventura County is required to prepare a local coastal program for the portion of the unincorporated area of the County within the Coastal Zone, Ventura County Coastal Area Plan. It addresses the County's significant coastal issues with a combination of land use designations, resource protection, and development objectives and policies. Specific issues evaluated in the document include, but are not limited to, agriculture, recreation and access, housing, and the location and planning of new development.

**City of Carpinteria Local Coastal Plan, 2003**

The City of Carpinteria Local Coastal Plan (LCP), which is included within the City's General Plan, together with the implementation programs, make up the City's Local Coastal Program. The Land Use Plan contained within the General Plan includes related policies for the various implementation programs such as the zoning ordinance consistent with the California Coastal Act of 1976.

**Affected Environment**

This project is located entirely within the coastal zone, defined as "the coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the waters therein and thereunder), strongly influenced by each other and in proximity to the shorelines of several coastal states, and includes islands, transitional and intertidal areas, salt marshes, wetlands, and beaches" (Coastal Zone Management Act of 1972, Section 304(1)).

Three Local Coastal Plans exist within the project study area. The Santa Barbara County Coastal Land Use Plan, the Ventura County Coastal Area Plan, and the City of Carpinteria Local Coastal Plan are included within their respective General Plans. These plans were prepared pursuant to the California Coastal Act of 1976.

**Environment Consequences**

The Santa Barbara County Coastal Land Use Plan, Ventura County Local Coastal Plan, and City of Carpinteria Local Coastal Plan are similar in their inclusion of policies to protect the coast. Implementation of the proposed project would not interfere with these

policies. Development would be limited to existing developed areas to avoid urban sprawl, maintenance of and access to coastal areas, and expansion of public works facilities to meet the needs of residents. The plans also call for protection of agricultural resources and stipulate that roadway improvements shall not adversely impact agricultural lands. Consistent with the Ventura County Local Coastal Plan, which includes one policy to “resolve the access problems from the communities of La Conchita and Mussel Shoals”, implementation of the proposed project would improve safety aspects associated with access to these communities. Preservation of existing views from U.S.101 to the ocean would also be protected through the City of Carpinteria, consistent with the City of Carpinteria Local Coastal Plan. To ensure further compliance with the Santa Barbara County Coastal Land Use Plan, Ventura County Coastal Area Plan, as well as the City of Carpinteria Local Coastal Plan, the proposed project would be required to apply for a Coastal Development Permit for the proposed improvements. No additional regional impacts or community level impacts are anticipated.

### ***NO BUILD Alternative***

Under the NO BUILD Alternative, existing conditions would remain and no impacts to the coastal zone would occur. However, existing congestion along U.S. 101 would not be alleviated, projected growth in the area would not be accommodated, and safety would not be improved along the roadway with implementation of the NO BUILD Alternative.

### ***BUILD Alternatives***

A Coastal Development Permit would be required to ensure compliance with the relevant coastal plans as well as the California Coastal Act. In addition, the project would comply with the Santa Barbara Coastal Land Use Plan, Ventura County Local Coastal Plan, and City of Carpinteria Local Coastal Plan. Specifically, the proposed project would not adversely impact agricultural lands, development would occur within existing developed areas, coastal access would be maintained, roadway expansion would occur in response to growing demand on the roadway, safety associated with access at La Conchita and Mussel Shoals would be improved, and views of the ocean would be preserved. No other regional or community-level impacts are anticipated.

### ***Avoidance, Minimization and/or Mitigation Measures***

The proposed BUILD alternatives would require coordination with local permitting agencies to ensure approval of Local Coastal Development Plans. A Coastal Development Permit would be required within each jurisdiction (e.g., Santa Barbara and Ventura Counties and the City of Carpinteria) to ensure compliance with the plans and the California Coastal Act.



## **2.1.4 Parks and Recreation**

### **Affected Environment**

#### **Parks**

A total of 18,309 acres within the project study area are designated open space, representing approximately 67 percent of the study area. This classification includes beaches, developed parks, flood waterways, and “undeveloped open space.”

A number of County and State-owned beaches are located within the project study area. Within the City of Carpinteria, existing recreational opportunities are provided by Carpinteria Beach State Park, Tar Pits Park, Carpinteria Bluffs Nature Preserve, Rincon Beach County Park, Monte Vista Park, and Viola Fields. No designated park space is located within the Ventura County portion of the study area.

Most of the park facilities offer space and opportunities for passive recreational uses including open space, benches and picnic tables, playing fields at Viola Fields, walking trails at Tar Pits Parks, and playground facilities at Monte Vista Park. A regional bicycle and hiking path and the alignment of the Coastal/De Anza Trail are proposed along a portion of the Carpinteria Bluffs Nature Preserve. Carpinteria Beach State Park also includes space for camping. Beach access is available from many of the parks as well as the communities of La Conchita and Mussel Shoals.

According to the National Park Service National Trails System Map (USDOI 2005), The Juan Bautista de Anza National Historic Trail, which is subject to the National Trails System Act (P.L. 90-543, as amended through P.L. 109-418) extends from Nogales, Arizona to San Francisco, California. A driving route along the trail follows U.S. 101 within the project area.

#### **Bikeways**

A portion of the Pacific Coast Bicycle Route is located within the study area. The Pacific Coast Bicycle Route provides a north/south connection between Vancouver, British Columbia, Canada and Imperial Beach in San Diego, California.

Within the project limits, there are existing bikeways located adjacent to the outside traffic lanes along most of northbound and southbound U.S. 101 until the U.S.101/SR150 Interchange. In the northbound direction, there is a bikeway on the outside shoulder that from where the Old Coast Highways ends until the U.S 101/SR 150 Interchange where cyclists must exit the highway. In the southbound direction, the bikeway begins at the U.S. 101/SR 150 Interchange and continues past the southern project limits to exit the roadway at Seacliff.



The bikeways are separated from traffic by striping. However, in the southbound direction from just south of the Bates Road Undercrossing to just north of Mussel Shoals in Ventura County, there is a five-foot bikeway that is separated from the eight-foot highway shoulder by a two-foot no-parking zone. At certain points in both directions, including the communities of La Conchita and Mussels Shoals, cyclists that are continuing straight must share the lane with vehicles that are entering and exiting the highway. Where access is authorized, cyclists enter and exit the highway by using the existing vehicle ramps and other entrances, with the exception of where the northbound Old Coast Highway joins the highway near the southern project limits. At this location, only cyclists have access to the Old Coast Highway, and there is no vehicle on-ramp. Please see Section 2.1.9 Traffic and Transportation/Pedestrian& Bicycle Facilities for further analysis.

## **Environmental Consequences**

### ***NO BUILD Alternative***

Under the NO BUILD Alternative, existing conditions would remain and no impacts to the parks and recreation would occur. However, existing congestion along U.S. 101 would not be alleviated, projected growth in the area would not be accommodated, and safety would not be improved along the roadway with implementation of the NO BUILD Alternative

### ***BUILD Alternatives***

Existing bikeways are located within the project area along U.S. 101. The existing northbound bikeway would be replaced with a Class I bikeway that would be separated from the street or highway. During construction, use of the existing facilities would be temporarily disrupted during project construction. However, once constructed, the bikeway would allow cyclists to continue to use U.S. 101, reducing the need for cyclists to alter their travel patterns with substantially improved safety. Therefore, implementation of the proposed project would result in positive impacts to travel patterns for cyclists.

The existing bikeway described above is not considered a Section 4(f) resource. 23 CFR 774.17 defines *Section 4(f) Property* as “publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance.” The FHWA Section 4(f) Policy Paper (March 1, 2005) states: “If the publicly owned bikeway is primarily used for transportation and is an integral part of the local transportation system, the requirements of Section 4(f) would not apply, since it is not a recreational area. Section 4(f) would apply to publicly owned bikeways (or portions thereof) designated or functioning

primarily for recreation, unless the official having jurisdiction determines it is not significant for such purpose.”

Even though the bikeways within the project limits are sometimes used for regional bicycle races, organized tours, and club training activities in the area, they are not designated primarily for recreation. Furthermore, they do not require the use of recreation and park areas established and maintained primarily for active recreation, open space, and similar purposes.

The proposed replacement and restoration of the bikeway is not considered an independent bikeway project. Independent bikeway or walkway construction projects are those highway construction projects that provide bicycle or pedestrian facilities in contrast to a project whose primary purpose is to serve motorized vehicles. As such, *Section 4(f) Statement and Determination for Independent Bikeway or Walkway Construction Projects* under the FHWA nationwide programmatic applications would not apply to this project. The Section 4(f) Statement does not cover bicycle or pedestrian facilities that are incidental items of construction in conjunction with highway improvements having the primary purpose of serving motor vehicular traffic.

According to the National Trails System Act, Section 7(c), “Other uses along the trail, which will not substantially interfere with the nature and purposes of the trail, may be permitted by the Secretary charged with the administration of the trail.” Implementation of the proposed project would not interfere with the nature and purpose of the Juan Bautista de Anza Historic National Trail.

Access to all other parks and recreational facilities would not be affected during construction or operation of the proposed project. No other regional or community-level impacts are projected to occur.

### **Avoidance, Minimization and/or Mitigation Measures**

During construction of either BUILD alternative measures would be taken to avoid impacts to cyclists. All possible planning measures to minimize harm would be implemented, including, but not limited to, the following:

- Construction staging would be implemented so that the affected bikeway would remain open for use during construction of the project, when feasible with K-rail or temporary barriers could be used.

- The Department shall provide advance notice of any access restrictions and/or closures via appropriate public outreach measures including direct coordination with affected stakeholders when feasible.
- Alternate route or space would be made available for use during construction and construction time should be limited to minimize potential route closures.

Additional measures are contained in Section 2.1.9, Traffic and Transportation/Pedestrian and Bicycle Facilities.

## **2.1.5 Growth**

### **Regulatory Setting**

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969, require evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations, 40 CFR 1508.8, refer to these consequences as secondary impacts. Secondary impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act (CEQA) also requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

### **Affected Environment**

As of 2000, the population within the study area totaled 15,341 persons. Of this total, the vast majority, 93.7 percent (14,369 persons), were located in the Santa Barbara County portion of the study area and approximately 6.3 percent (972 persons) located in the Ventura County portion. The Santa Barbara County and Ventura County portions of the study area accounted for approximately 3.6 percent and 0.1 percent of the total county populations, respectively.

Between 1990 and 2000, the study area showed only a minor increase 1.2 percent in population, reflecting a much more limited level of growth, compared with Santa Barbara and Ventura Counties at 8.0 percent and 12.6 percent, respectively. Projected regional population growth reveals that strong population growth within the region is anticipated to continue, Santa Barbara is expected to grow by 20 percent and Ventura County by 30

percent by 2030. Table 2.1-2 below lists the population and projections for the study area and Santa Barbara and Ventura County.

**Table 2.1-2 Population and Projections in Study Area and Surrounding Areas**

	1990	2000	% Change 1990-2000	2010	2020	2030	% Change 2000-2030
Study Area	15,166	15,341	175 (1.2%)	--	--	--	--
Santa Barbara County	369,608	399,347	29,739 (8.0 %)	430,200	459,600	481,400	20.5
Ventura County	669,016	753,197	84,181 (12.6%)	865,149	929,181	989,765	33.0

Source: U.S. Bureau of the Census 1990 and 2000,

SBCAG Regional Growth Forecast 2007, SCAG City Projections 2004.

**Note:** It is worth noting that between the last two U.S. decennial censuses (1990 and 2000) a number of block, block group, and tract boundaries within the study area were slightly adjusted. As a result, unquantifiable differ

As illustrated in Figure 2.1-3, while most of the study area was sparsely populated, smaller, comparatively densely populated areas were located within the southern area of Carpinteria, La Conchita and to a lesser degree, Rincon Point and Mussel Shoals.

However, geographic and planning constraints limit the potential for growth to occur within the study area. Much of the vacant land within the study area is not designated for residential uses and limited space remains for new development to occur. New development could occur in the commercial and/or industrial sectors or as mixed-use development within the City of Carpinteria or within the open space or industrial areas in Ventura County.

## **Environmental Consequences**

### **NO BUILD Alternative**

Under the NO BUILD Alternative, existing conditions would remain and no impacts to growth would occur. However, existing congestion along U.S. 101 would not be alleviated, projected growth in the area would not be accommodated, and safety would not be improved along the roadway with implementation of the NO BUILD Alternative

### **MINIMUM BUILD Alternative**

Given that the only differences between the FULL BUILD and MINIMUM BUILD Alternatives are the widening at the Bates Road Undercrossing, varying shoulder widths between two and seven feet, as well as limited right-of-way acquisition under the "FULL BUILD" alternative, the MINIMUM BUILD Alternative would be narrower than the "FULL BUILD" alternative. Therefore, impacts to growth under the MINIMUM BUILD Alternative would be considered the same as or less than the FULL BUILD Alternative.

### **FULL BUILD Alternative**

Most of the proposed project improvements would occur within existing right-of-way, with minimal additional right-of-way and would not open any new areas to development. No changes to existing or proposed land uses and/or density would occur as a result of the proposed project. None of the areas within the study area identified for future development would be made directly more accessible with implementation of the proposed project. The proposed project would not result in any regional or community-level growth inducing impacts. No further analysis is required.

No direct growth inducing impacts are anticipated. The proposed project would not connect previously isolated areas. However, the provision of additional lanes to accommodate existing and projected traffic volumes would alleviate congested conditions along U.S. 101 within the project area. This could make U.S. 101 increasingly attractive to motorists as a viable transportation corridor and method of traveling through the project area and could potentially result in an increased interest and pressure to develop the undeveloped and/or agricultural areas within the study area. Improvements to traffic circulation along U.S. 101 would likely reduce congestion along other local major roads throughout the study area, as motorists would not have to use these roads to compensate for, or avoid, congestion along U.S. 101.

### **Avoidance, Minimization and/or Mitigation Measures**

No growth inducing impacts would occur as a result of implementation of any of the three alternatives. No avoidance, minimization or mitigation measures are necessary.



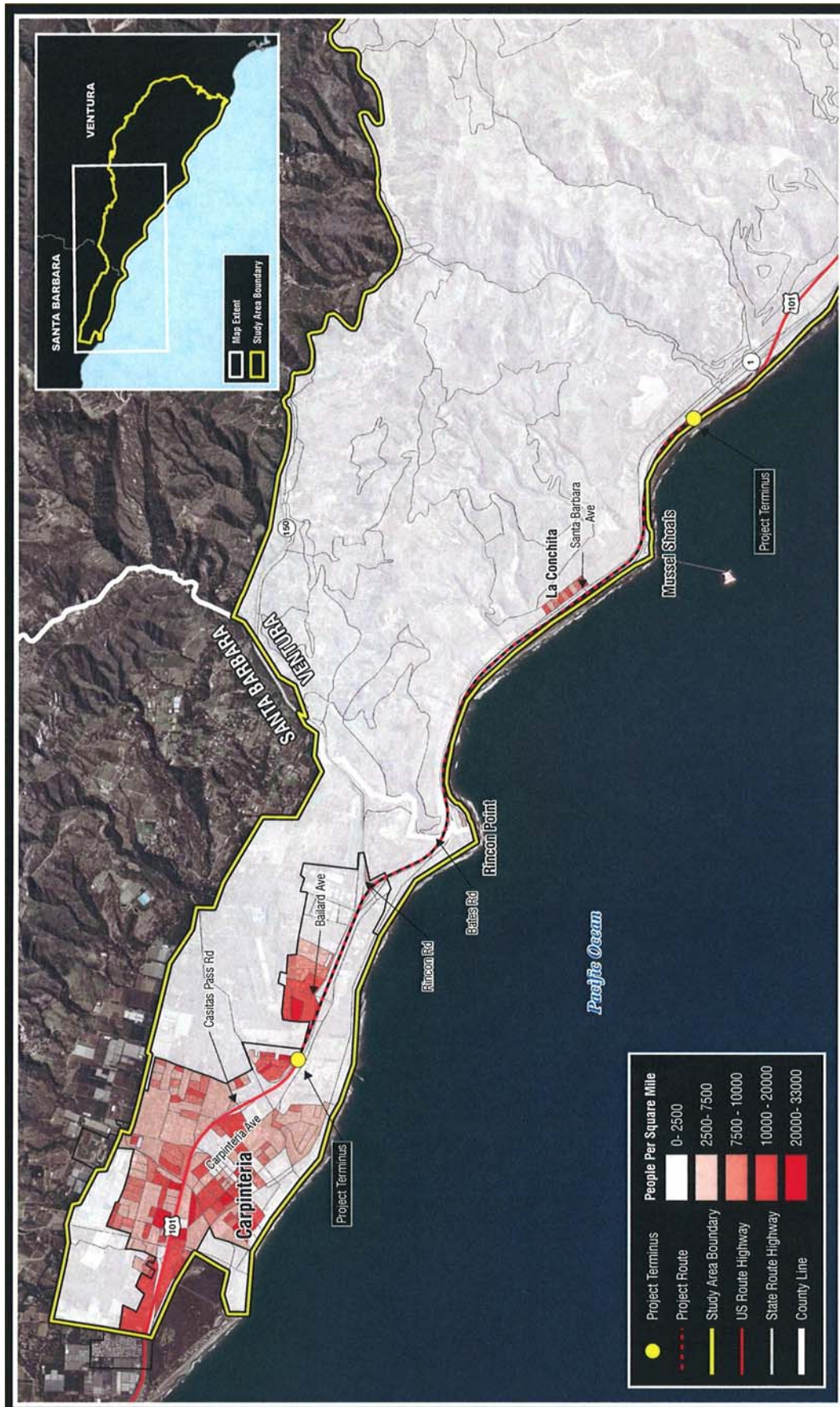


Figure 2.1-3 Population Density

### **2.1.6 Farmlands**

#### **Regulatory Setting**

The National Environmental Policy Act (NEPA) and the Farmland Protection Policy Act (FPPA, 7 USC 4201-4209; and its regulations, 7 CFR Part 658) require federal agencies, such as FHWA, to coordinate with the Natural Resources Conservation Service (NRCS) if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. Farmland includes prime farmland, unique farmland, and land of statewide or local importance.

The California Environmental Quality Act requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

According to the Ventura County General Plan, “Ventura County is one of the principal agricultural counties in the State.” To preserve farmland within Ventura County, a number of programs have been adopted, including widespread use of Land Conservation Act Contracts to provide tax rate reductions as an incentive for maintaining agriculture and participation in Greenbelt Agreements that seek to prevent urban encroachment into agricultural areas. In compliance with the Ventura County General Plan, the Ventura County Coastal Area Plan seeks to preserve agricultural lands to the maximum extent feasible, prohibiting land divisions that will affect agricultural productivity. The County of Santa Barbara General Plan Land Use Element cites a policy of preservation of open lands under the Williamson Act. The City of Carpinteria General Plan identifies similar objectives and policies related to agricultural land use, including encouraging establishment and conservation of open-field agriculture, as well as discouraging subdivisions of land that could promote conversion of agricultural land.

#### **Affected Environment**

Agricultural resources within Santa Barbara and Ventura counties include orchards, vineyards, nurseries, row crops, pastures, and ranges. Approximately 4,204 acres, or 15 percent of the area studied for the analysis, is designated as important farmland (prime or unique farmland and farmland of state or local importance). Within the study area, approximately 12.7 percent (3,504 acres) of the total land area is used for agriculture. A variety of vegetable, field, fruit, nut, and seed crops are grown in the area. Fruit and vegetable crops, such as strawberries, wine grapes, and broccoli remain the highest-

valued crops within Santa Barbara County. Strawberries are also important in Ventura County, as well as nursery stock, lemons, celery, and tomatoes.

There is approximately 1,000 acres of non-preserve agricultural lands located in the Ventura north coast area. Prime soils occur on about 130 of the 1,000 acres. Most of the 130 acres are zones "C-A" (Coastal Agricultural, 40 acre minimum). The rest of the non-preserve agricultural acreage is primarily zoned "C-O-S" (Coastal Open Space, 10 acre minimum). These other agricultural lands occur in parcel sizes of seven to 65 acres.

According to the 2006 Santa Barbara County Agricultural Production Report, gross production was valued at approximately \$1 billion, which is a \$19.1 million increase in gross value as compared to 2005 figures. According to the 2006 Ventura County Crop Report, the estimated gross value for agriculture was valued at approximately \$1.5 billion, which is a \$282 million increase as compared to 2005 figures. According to the Farmland Mapping and Monitoring Program, between 1984 and 2006, Santa Barbara County lost 11,091 acres of agricultural land, representing approximately one percent of the County's total inventoried area. Similarly, Ventura County lost 21,204 acres of agricultural land within the same period. This represents approximately four percent of the County's total inventoried area.

About 70 percent, 2,300 acres, of the Ventura County north coast agricultural lands are in two of the four agricultural preserves under the California Land Conservation Act (a.k.a., the Williamson Act) within the project limits. The four preserves are:

1. Rincon Del Mar Preserve: Consists of three preserves, 409 acres of which are in the zone. The steep slopes have been graded to accommodate avocado orchards. The area is zoned "C-A" (Coastal Agricultural, 40 acre minimum lot size).
2. La Conchita Preserve: Immediately inland from the community of La Conchita, 342 acres of this preserve are in the coastal zone. The property has steep slopes, and avocado production is the primary agricultural use. The zoning for the 342 acres is "C-A".
3. Faria Family Partnership: Consists of a single parcel of 249.76 acres almost entirely within the coastal zone. A portion of the land is used for nursery and field crops, with the rest open field and hilly terrain. The zoning for the portion of the property within the coastal zone is "C-A".
4. Claeysen (Taylor) Ranch Preserve: Seven parcels with coastal zone portions ranging in size from 15 to 290 acres, totaling about 1,320 acres. Grazing and row crops near the Ventura River are the primary agricultural uses. The zoning for the lands within the



coastal zone is "C-A". On its southern boundaries, the Claeysen Ranch is adjacent to the City of San Buenaventura. Both the City and the County have agreed to maintain a stable urban boundary at the Ventura River levee.

Within the project limits in the City of Carpinteria is zoned farmland near Bailard Road adjacent to Via Real Blvd.

## **Environmental Consequences**

### ***NO BUILD Alternative***

Under the NO BUILD Alternative, existing conditions would remain and no impacts to farmland would occur. However, existing congestion along U.S. 101 would not be alleviated, projected growth in the area would not be accommodated, and safety would not be improved along the roadway with implementation of the NO BUILD Alternative

### ***BUILD Alternatives***

No farmland impacts are anticipated. Implementation of most of the proposed project improvements would occur within existing right-of-way, with minimal additional right-of-way. No project-related growth is anticipated to occur. Therefore, no changes to existing or proposed land uses, including farmland, would occur as a result of the proposed project or subsequent project-related growth. While farmland is present within the study area, the project would not convert or affect any farmland.

## **Avoidance, Minimization and/or Mitigation Measures**

Because none of the proposed BUILD alternatives would result in substantial adverse impacts to farmland, no avoidance, minimization, and/or mitigation measures are required.

## **2.1.7 Community Impacts – Community Character and Cohesion**

### **Regulatory Setting**

The National Environmental Policy Act of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42 United States Code 4331(b)(2)]. The Federal Highway Administration in its implementation of the National Environmental Policy Act [23 United States Code 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act, an economic or social change by itself is not to be considered a significant impact on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's impacts.

## **Affected Environment**

### ***Population and Housing***

The following table, Table 2.1-3 shows the racial and ethnic breakdown for the study area between 1990 and 2000 (this is the latest known data available for the study area). The study area was predominantly "White", accounting for approximately 74.6 percent of the total population. Other single race categories such as "Asian" or "Black or African American" populations represented much smaller components of the population at 2.6 percent and 0.6 percent respectively. "Hispanic" populations within the study area comprised approximately 40.8 percent of the total population. "Hispanic" populations within the Santa Barbara County portion of the study area comprised approximately 34.2 percent of the total population within that area, whereas "Hispanic" populations within the Ventura County portion of the study area were proportionately much lower, comprising 33.4 percent of the total population.

In general, as of 2000, the racial and ethnic compositions within Santa Barbara and Ventura counties showed similar trends to those seen in the area studied for this analysis. When comparing the study area with the surrounding region, "White" populations in Santa Barbara and Ventura counties accounted for 72.7 and 69.9 percent, respectively, of the total population. Other single-race categories such as "Asian" or "Black or African American" populations were again much lower regionally, but were proportionately higher when compared with the study area.

As of 2000, the "Hispanic" population within the study area was slightly higher than the region, comprising 40.8 percent of the total population, while populations within Santa Barbara and Ventura Counties were 34.2 percent and 33.4 percent, respectively. Minority populations within Santa Barbara and Ventura counties, which comprised 43.1 and 43.2 percent, respectively, of the total population, were similar to that of the study area, at 46.2 percent.

**Table 2.1-3 Regional Study Area and Community Race Ethnicity – 1990-2000**

	Santa Barbara County		Ventura County		Study Area (Santa Barbara County)		Study Area (Ventura County)		Study Area Total		Southern Area of Carpinteria	Rincon Point	Rincon Hills	Rincon Area Total	La Conchita	Mussel Shoals
	1990	2000	1990	2000	1990	2000	1990	2000	1990	2000	2000	2000	2000	2000	2000	2000
Total Population	369,608	399,347	669,016	753,197	13,879	14,369	1,287	972	15,166	15,341	2,984	146	87	233	338	92
<b>Race</b>																
White	285,461 (77.2%)	290,418 (72.7%)	529,166 (79.1%)	526,721 (69.9%)	12,430	10,571	1,191	873	12,430 (82.0%)	11,444 (74.6%)	2,193 (73.5%)	136 (93.2%)	82 (94.3%)	218 (93.6%)	304 (89.9%)	82 (89.1%)
Black or African American	10,402 (2.8%)	9,195 (2.3%)	15,629 (2.3%)	14,664 (1.9%)	108	85	3	8	108 (0.7%)	93 (0.6%)	26 (0.9%)	1 (0.7%)	0 (0.0%)	1 (0.4%)	1 (0.3%)	0 (0.0%)
American Indian and Alaska Native	3,351 (0.9%)	4,784 (1.2%)	4,909 (0.7%)	7,106 (0.9%)	114	135	8	5	114 (0.8%)	140 (0.9%)	27 (0.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	0 (0.0%)
Asian	16,429 (4.4%)	16,344 (4.1%)	34,579 (5.2%)	40,284 (5.3%)	344	366	12	27	344 (2.3%)	393 (2.6%)	85 (2.8%)	7 (4.8%)	4 (4.6%)	11 (4.7%)	5 (1.5%)	7 (7.6%)
Native Hawaiian and Other Pacific Islander*	N/A	700 (0.2%)	N/A	1,671 (0.2%)	N/A	25	N/A	7	N/A	32 (0.2%)	3 (0.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	0 (0.0%)
Some Other Race	53,965 (14.6%)	60,683 (15.2%)	84,733 (12.7%)	133,178 (17.7%)	2,170	2,570	73	28	2,170 (14.3%)	2,598 (16.9%)	501 (16.8%)	2 (1.4%)	0 (0.0%)	2 (0.9%)	15 (4.4%)	1 (1.0%)
Two or More Races*	N/A	17,223 (4.3%)	N/A	29,573 (3.9%)	N/A	617	N/A	24	N/A	641 (4.2%)	149 (5.0%)	0 (0.0%)	1 (1.2%)	1 (0.4%)	11 (3.3%)	2 (2.2%)
Total Non-White	--	108,929 (27.3%)	--	226,476 (30.1%)	--	3,798 (26.4%)	--	99 (10.2%)	--	3,897 (25.4%)	791 (26.5%)	10 (6.8%)	5 (5.7%)	15 (6.4%)	34 (10.1%)	10 (10.9%)
<b>Hispanic or Latino</b>																
Hispanic or Latino (of any race)	98,199 (26.6%)	136,668 (34.2%)	176,952 (26.5%)	251,734 (33.4%)	5,285	6,174	183	82	5,285 (34.8%)	6,256 (40.8%)	1,432 (48.0%)	3 (2.1%)	12 (13.8%)	15 (6.4%)	52 (15.4%)	4 (4.3%)
<b>Total Minority</b>	<b>124,534 (33.7%)</b>	<b>172,264 (43.1%)</b>	<b>227,001 (33.9%)</b>	<b>325,748 (43.2%)</b>	<b>5,687 (41.0%)</b>	<b>6,944 (48.3%)</b>	<b>289 (22.5%)</b>	<b>147 (15.1%)</b>	<b>5,687 (37.5%)</b>	<b>7,091 (46.2%)</b>	<b>1,642 (55.0%)</b>	<b>10 (6.8%)</b>	<b>16 (18.4%)</b>	<b>26 (11.2%)</b>	<b>57 (16.9%)</b>	<b>11 (12.0%)</b>

**Source:** US Bureau of the Census, 1990, Table DP-1, Profile of General Demographic Characteristics; Table P012, Hispanic Origin by Race; US Bureau of the Census, 2000, Table DP-1, Profile of General Demographic Characteristics; Table DP-3, Profile of General Demographic Characteristics; Table QT-P4, Race, Combinations of Two Races, and Not Hispanic or Latino.

**Note:** In the 1990 Census, Asian and Native Hawaiian and Other Pacific Islander were tabulated together. Two or More Races category not tabulated in 1990 Census.

Between 1990 and 2000, the study area showed an approximately 8.7 percent increase in the total minority population which was similar to both Santa Barbara and Ventura Counties, which showed increases of 9.3 percent and 9.4 percent respectively. This data indicates the region is becoming increasingly racially and ethnically diverse.

## Age

As of 2000, most of the total population within the study area (15,341 persons), approximately 62.5 percent (9,585 persons) were of working age, defined as between 18 and 64 years of age. Additionally, approximately 25.2 percent were under 18 years and approximately 12.3 percent were 65 years and over within the study area as well as Santa Barbara and Ventura Counties which has remained relatively constant.

Table 2.1-4 shows that, as of 2000, the age breakdown in the study area was similar to the surrounding region. In Santa Barbara and Ventura Counties, the working age populations constituted approximately 62.4 percent and 61.4 percent, respectively, of the total population, similar to the study area at 62.5 percent. Additionally, within these same regional areas, the population 65 years and older constituted 12.7 percent and 10.2 percent of the total population of Santa Barbara and Ventura Counties, respectively. The population 65 years and older constituted approximately 12.3 percent of the total population within the study area.

**Table 2.1-4 Study Area and County Age Breakdown-1990-2000**

	Study Area		Santa Barbara		Ventura	
	1990	2000	1990	2000	1990	2000
Total Population	15,166	15,341	369,608	399,347	669,016	753,197
Under 18 Years	3,685 (24.3%)	3,864 (25.2%)	85,887 (23.2%)	99,502 (24.9%)	182,986 (27.4%)	214,244 (28.4%)
18 to 64 Years	9,745 (64.3%)	9,585 (62.5%)	238,106 (64.4%)	249,080 (62.4%)	423,025 (63.2%)	462,149 (61.4%)
65 Years and Over	1,736 (11.4%)	1,892 (12.3%)	45,615 (12.3%)	50,765 (12.7%)	63,005 (9.4%)	76,804 (10.2%)
Median Age	N/A*	34.3 – 37.2	N/A	33.4	N/A	34.2

**Source:** US Bureau of the Census, 1990, Table DP-1, Profile of General Demographic Characteristics; US Bureau of the Census, 2000, Table DP-1, Profile of General Demographic Characteristics.

\*Median age unavailable in the 1990 census.

The population under 18 years of age consisted of approximately 25.2 percent of the population within the study area, 24.9 percent of the population within Santa Barbara County, and 28.4 percent of the population within Ventura County. Within the study area, the median age ranged between 34.3 and 37.2 years, slightly higher than that of Santa Barbara or Ventura Counties.

### 2.1.8 Neighborhoods/Communities

Figure 2.1-4 illustrates the Total Minority Population within the study area.

#### ***Affected Environment***

##### ***Southern Area of Carpinteria***

Carpinteria offers a mix of uses and services available to both residents and visitors. The southern area of Carpinteria within the project limits is characterized by business parks, industrial uses (including light industrial manufacturing and oil processing), residences, and open space areas. The City also offers school and library services. As of 2000, the population in this portion totaled 2,984 persons, and represented approximately 21.0 and 19.5 percent of the total population of the City of Carpinteria and the overall study area, respectively, located to the north of the area (Information about the southern area of Carpinteria was determined using census tract data and subtracting block data associated with Rincon Point, as a portion of Rincon Point is located within the same census tract as the southern area of Carpinteria). As of 2000, the area was predominantly “White”, which is consistent with the breakdown for the study area overall. “Hispanic” populations within the southern area of Carpinteria were slightly higher than the “Hispanic” populations within the study area. As of 2000, the total minority population within the southern area of Carpinteria was approximately 55.0 percent.

##### ***Rincon Area***

In contrast to Carpinteria, the Rincon area is characterized by residential and agricultural/open space areas. Within the Rincon area, Rincon Point is a gated residential community with 7,000 square foot minimum lots. The area north of U.S. 101 is characterized primarily by agriculture and is sparsely populated. Major employment and business centers are located outside of the area, the closest being within the City of Carpinteria, approximately 2.3 miles north and accessible via U.S. 101 and Route 192.

As of 2000, the population within the Rincon area totaled approximately 233<sup>1</sup> persons. Of this population, the majority is located within Rincon Point (approximately 62.7 percent) with the remainder located within the rural residential area north of U.S. 101. The Rincon area represents approximately 1.5 percent of the total population of the study area. The Rincon area was less racially and ethnically diverse than the study area, and predominantly White, representing a higher percentage than the breakdown for the study area overall. Hispanic populations within the Rincon area were substantially lower than those within the study area overall. As of 2000, total minority population within the Rincon area was approximately 11.2 percent.

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<sup>1</sup>Census block data was tabulated to determine the population of this community. It should be noted that block 1100 within tract 12.05 in Ventura County also encompasses a portion of the community of Mussel Shoals.

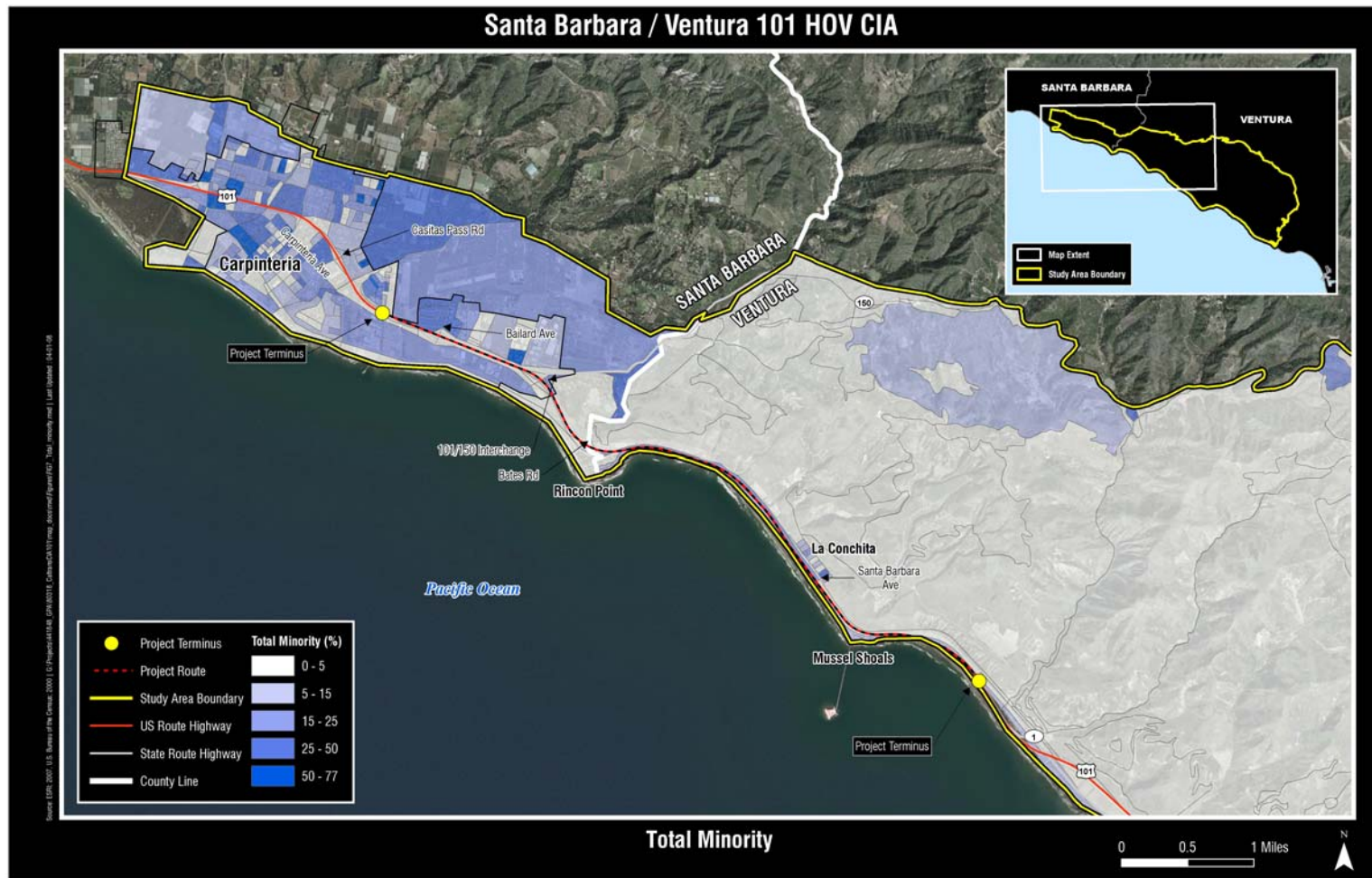


Figure 2.1-4 Total Minority



### **La Conchita**

As of 2000, the population within La Conchita totaled 338<sup>2</sup> persons, and represented approximately 2.1 percent of the total population of the study area. As shown in Table 4.1, as of 2000, the community was predominantly White, representing a higher percentage than the breakdown for the study area overall. Hispanic populations within La Conchita, at 15.4 percent, were substantially lower than the Hispanic populations within the study area overall. While other racial minority populations were present to varying degrees in La Conchita, the Hispanic population represented the largest single minority component within the community. As of 2000, total minority population within La Conchita was approximately 16.9 percent.

### **Mussel Shoals**

As of 2000, the population within Mussel Shoals totaled 92\* persons, and represented approximately 0.6 percent of the total population of the study area and the community was predominantly White, representing a higher percentage than the breakdown for the study area overall. Hispanic populations within Mussel Shoals were substantially lower than that within the study area overall. As of 2000, total minority population within the study area was approximately 12.0 percent.

## ***Environmental Consequences***

Due to their relatively isolated locations, defined geographic boundaries, long residency as well historical events, the communities within the study area exhibit characteristics of varying degrees of cohesion. While evident to some degree within Mussel Shoals, and to some extent within Rincon Point and the southern area of Carpinteria, the cohesiveness is most prominent within La Conchita. Additionally, proximity to the ocean as well as the amenity of ocean views from both residences and public areas within the communities represents an important factor of overall quality of life.

### ***Housing***

As of 2000, there were 6,111 housing units within the study area, of which 5,650 were occupied, representing a vacancy rate of approximately 10.7 percent. A total of 5,524 units were located within Santa Barbara County, representing approximately 3.9 percent of the County's housing units. A total of 587 units were located in Ventura County, representing approximately only 0.2 percent of the County's 251,712 housing units.

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<sup>2</sup> Census block data was tabulated to determine the population of this community. It should be noted that block 1064 within tract 12.05 in Ventura County also encompasses a portion of the agricultural uses to the north and east, so a slight overestimation is included.

\*Census block data was tabulated to determine the population of this community. It should be noted that block 1100 within tract 12.05 in Ventura County also encompasses a portion of the Rincon Point.

As shown in Tables 2.1-5a/2.1-5b, between 1990 and 2000, the number of housing units increased by approximately 0.9 percent in the study area. During the same period, the surrounding region showed higher rates of increase in housing units, at 3.4 percent and 10.2 percent for Santa Barbara County and Ventura County respectively. Vacancy rates in Santa Barbara and Ventura Counties, at 4.4 percent and 3.4 percent, respectively, were substantially lower than that within the study area. As of 2000, the homeownership rate within the study area was 58.6 percent similar to that of Santa Barbara County (56.1 percent), but lower than Ventura County (67.6 percent).

As of 2000, the majority of households within the study area were composed of one or two people, and the vast majority of study area residents formed part of households of four-or-less persons. As of 2000, household size within the study area was similar to that of both Santa Barbara and Ventura Counties; however, there are less single-person households in Ventura County. A number of planned future projects are identified within the study area, including residential developments. Beyond those currently identified, there are few remaining areas within the City of Carpinteria and Ventura County where development of housing could occur without conflicting with existing land use designations or policies aimed at protecting coastal resources. Additional multi-family development is expected to occur within areas designated for multi-family use in the City of Carpinteria. Within Ventura County, future residential development could occur within Rincon Point, La Conchita, and Mussel Shoals, although development is constrained by lack of available vacant space.



**Table 2.1-5a Housing Data**

For Communities, Study Area, and Region 1990-2000 (cont. on next page)

	Study Area			Santa Barbara County			Ventura County			Southern area of Carpinteria	Rincon Point	Rincon Hills	La Conchita	Mussel Shoals
	1990	2000	Percent Change 1990- 2000	1990	2000	Percent Change 1990- 2000	1990	2000	Percent Change 1990- 2000	2000	2000	2000	2000	2000
Housing Units	6,056	6,111	0.9%	138,149	142,901	3.4%	228,478	251,712	10.2%	1,077	101	28	189	65
Owner Occupied	--	3,167 (58.6%)	--	--	76,611 (56.1%)	--	--	164,380 (67.6%)	--	662	54	22	81	32
Renter Occupied	--	2,238 (41.4%)	--	--	60,011 (43.9%)	--	--	78,854 (32.4%)	--	363	10	3	77	12
<b>Total</b>	--	<b>5,405 (100%)</b>	--	--	<b>136,622 (100%)</b>	--	--	<b>243,234 (100%)</b>	--	<b>1,025 (100%)</b>	<b>64 (100%)</b>	<b>25 (100%)</b>	<b>158 (100%)</b>	<b>44 (100%)</b>
Vacancy Rate	--	10.7%	--	--	4.4%	--	--	3.4%	--	4.8%	36.6%	10.7%	16.4%	32.3%
<b>Owner-Occupied</b>														
1-person household	--	755 (23.8%)	--	--	15,909 (20.7%)	--	--	26,763 (16.3%)	--	213 (32.2%)	10 (18.5)	2 (9.1%)	22 (27.1%)	7 (21.9%)
2-person household	--	1,123 (35.4%)	--	--	28,345 (37.0%)	--	--	53,603 (32.6%)	--	221 (33.4%)	29 (53.7%)	5 (22.7%)	44 (54.3%)	18 (56.3%)
3-person household	--	472 (14.9%)	--	--	11,434 (15.0%)	--	--	28,202 (17.1%)	--	78 (11.8%)	6 (11.1%)	5 (22.7%)	10 (12.3%)	5 (15.6%)
4-person household	--	420 (13.2%)	--	--	10,962 (14.3%)	--	--	29,428 (17.9%)	--	66 (10.0%)	5 (9.2%)	6 (27.3%)	2 (24.6%)	1 (3.1%)
5-person household	--	205 (6.5%)	--	--	5,262 (6.9%)	--	--	1,4134 (8.6%)	--	45 (6.8%)	2 (3.7%)	1 (4.5%)	2 (24.7%)	0 (0.0%)
6-person household	--	82 (2.6%)	--	--	2,238 (2.9%)	--	--	5,925 (3.6%)	--	20 (3.0%)	2 (3.7%)	1 (4.5%)	1 (12.3%)	1 (3.1%)
7-or-more- person household	--	110 (3.5%)	--	--	2,461 (3.2%)	--	--	6,325 (3.8%)	--	19 (2.9%)	0 (0.0%)	2 (9.1%)	0 (0.0%)	0 (0.0%)
<b>Total</b>	--	<b>3,167 (100%)</b>	--	--	<b>76,611 (100%)</b>	--	--	<b>164,380 (100%)</b>	--	<b>662 (100%)</b>	<b>54 (100%)</b>	<b>22 (100%)</b>	<b>81 (100%)</b>	<b>32 (100%)</b>

**Table 2.1-5b Housing Data**  
for Communities, Study Area, and Region 1990-2000

	Study Area			Santa Barbara County			Ventura County			Southern area of Carpinteria	Rincon Point	Rincon Hills	La Conchita	Mussel Shoals
	1990	2000	Percent Change 1990- 2000	1990	2000	Percent Change 1990- 2000	1990	2000	Percent Change 1990- 2000	2000	2000	2000	2000	2000
<b>Renter-Occupied</b>														
1-person household		583 (26.0%)	--	--	17,301 (28.9%)	--	--		--	63 (17.6%)	5 (50%)	1 (33.3%)	21 (27.2%)	5 (41.7%)
2-person household		590 (26.3%)	--	--	15,621 (26.0%)	--	--		--	77 (21.2%)	4 (40%)	0 (0.0%)	32 (41.5%)	4 (0.33%)
3-person household		343 (15.3%)	--	--	8,864 (14.7%)	--	--		--	52 (14.3%)	0 (0.0%)	1 (33.3%)	14 (18.2%)	2 (16.6)
4-person household		297 (13.2%)	--	--	8,146 (13.5%)	--	--		--	79 (21.8%)	0 (0.0%)	0 (0.0%)	5 (6.5%)	0 (0.0%)
5-person household		192 (8.6%)	--	--	4,684 (7.8%)	--	--		--	41 (11.3%)	1 (10%)	0 (0.0%)	3 (3.9%)	1 (8.3%)
6-person household		103 (4.7%)	--	--	2,483 (4.1%)	--	--		--	28 (7.7%)	0 (0.0%)	1 (33.3%)	2 (2.6%)	0 (0.0%)
7-or-more- person household		130 (5.8%)	--	--	2,912 (4.8%)	--	--		--	23 (6.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
<b>Total</b>		<b>2,238 (100%)</b>	--	--	<b>60,011 (100%)</b>	--	--		--	<b>363 (100%)</b>	<b>10 (100%)</b>	<b>3 (100%)</b>	<b>77 (100%)</b>	<b>12 (100%)</b>

**Source:** US Bureau of the Census, 1990, 2000, Table DP-1, Profile of General Demographic Characteristics, Table QT-H1, General Housing Characteristics: 2000, Table QT-H2, Tenure, Household Size, and Age of Householder: 2000.

### **Southern Area of Carpinteria**

As of 2000, there were 1,077 housing units within the southern area of Carpinteria, with a vacancy rate of approximately 4.8 percent. This is less than the vacancy rate of the study area, but similar to vacancy rates in Santa Barbara County. Home ownership levels within southern area of Carpinteria were slightly higher than the home ownership levels within the study area and Santa Barbara County. As shown, household size within area of Carpinteria was similar to the overall study area.

### **Rincon Area**

As of 2000, there were 129 housing units in the Rincon area, with a vacancy rate of approximately 31.0 percent for the area, possibly reflecting a greater degree of seasonal use. Of this total, a majority (101 housing units) was located in Rincon Point, with the remainder located in the area north of U.S. 101. Home ownership levels and household size were similar to that within the overall study area; however, household size was generally smaller within Rincon Point

### **La Conchita**

As of 2000, there were 189 housing units in La Conchita, with a vacancy rate of approximately 16.4 percent. Home ownership rates were slightly less than the home ownership levels within the overall study area. As shown, household size within La Conchita was similar to the overall study area.

### **Mussel Shoals**

As of 2000, there were 65 housing units in Mussel Shoals, with a vacancy rate of approximately 32.3 percent. Home ownership levels were higher than those within the overall study area. Household size within Mussel Shoals, as shown, was similar to the overall study area.

## **Environmental Consequences**

No regional or community-level impacts are anticipated to occur with implementation of the alternatives. Specifically, no displacement of residents or populations would occur and population characteristics and distribution within the study area would not change. No residences or businesses would be displaced as a result of the proposed project. No neighborhoods would be divided or separated from existing community facilities.

### ***Economic Conditions***

The economy within the study area differs markedly from that of the surrounding region. The economies of the greater Santa Barbara and Ventura Counties are diversified and divided amongst the education, tourism, service, agriculture, and technology sectors. While tourism and services are present, one of the main contributors to the economy of the study area remains agricultural production. Due to location and development patterns, there is a lack of a broad range of local services in the smaller communities within the study area. Therefore, the majority of the goods and services required by the smaller communities within the study area are provided by the City of Carpinteria. Commercial uses within the study area, predominantly in the form of business parks and office development, are primarily located within the southern area of Carpinteria, adjacent to major transportation corridors such as U.S. 101. Industrial development and facilities are also located in the southern area of Carpinteria, and development related to oil extraction can be found throughout the study area. Additionally, hotel uses can be found in Mussel Shoals at the form of the Cliff House Inn, immediately adjacent to SB U.S. 101 and the Pacific Ocean.

### ***Employment***

Within the study area, top employers within the City of Carpinteria include the Carpinteria Unified School District as well as research companies such as the DAKO Corporation (cancer diagnostics) and NuSil Technology (Silicone compounds), as well as AGIA, Inc. (insurance), and CKE Enterprises (restaurant franchises). Within the remainder of the study area (unincorporated portions of Santa Barbara and Ventura Counties), agricultural services and products, large commercial nursery operations, as well as oil extraction provide primary employment opportunities.

Based on data from the California Employment Development Department (EDD), the unemployment rate in Santa Barbara County has averaged 4.6 percent over the past seven years (2000-2007) and was 5.2 percent as of February 2008. In Ventura County, the unemployment rate averaged 5.0 percent over the same period and was 5.5 percent as of February 2008 (EDD 2007). More recent unemployment information for the study area is not available.

### ***Labor Force Characteristics***

Table 2.1.6 that includes information regarding labor force characteristics was derived from data provided by the U.S. Bureau of the Census. As this data is not available at the census block group level, the description of labor force characteristics for the study area

compares the City of Carpinteria and the Ventura County portion of the study area to greater Santa Barbara and Ventura Counties.

As of 2000, the Ventura County portion of the study area had a population of 972 persons, with a labor force of 759 persons. The City of Carpinteria had a population of 14,194 persons. Of this, the labor force consisted of 11,050 persons. The City of Carpinteria and the Ventura County portion of the study area generally mirror the labor force compositions of the greater Santa Barbara and Ventura Counties. The primary occupation in the region is management and professional, with the primary industries in the area education, health, and social services. As shown, the primary class of worker is private wage and salary.

**Table 2.1-6 Labor Force Characteristics(cont. on next page)**

	Ventura County Portion of Study Area		Santa Barbara Portion of Study Area		City of Carpinteria		Santa Barbara County		Ventura County	
<i>Employment Status</i>										
Population 16 years and over	759		11,011		11,050		310,929		562,080	
In labor force	547	72.1%	7,355	66.8%	7,432	67.3%	196,304	63.1%	372,020	66.2%
Civilian labor force	547	72.1%	7,340	66.7%	7,417	67.1%	193,720	62.3%	367,453	65.4%
Employed	533	70.2%	7,115	64.6%	7,192	65.1%	180,716	58.1%	348,338	62.0%
Unemployed	14	1.8%	225	2.0%	225	2.0%	13,004	4.2%	19,115	3.4%
Percent of civilian labor force	--	2.6%	--	9.7%	--	3.0%	--	6.7%	--	5.2%
Armed Forces	0	0.0%	15	0.1%	15	0.1%	2,584	0.8%	4,567	0.8%
Not in labor force	212	27.9%	3,656	33.2%	3,618	32.7%	114,625	36.9%	190,060	33.8%
<b>Total</b>	<b>759</b>	<b>100.0%</b>	<b>11,011</b>	<b>100.0%</b>	<b>11,050</b>	<b>100.0%</b>	<b>310,929</b>	<b>100.0%</b>	<b>562,080</b>	<b>100.0%</b>
<i>Occupation</i>										
Management and professional	227	42.6%	2,447	34.4%	2,431	33.8%	63,893	35.4%	127,157	36.5%
Service	66	12.4%	1,283	18.0%	1,332	18.5%	30,865	17.1%	46,762	13.4%
Sales and office	172	32.3%	1,750	24.6%	1,767	24.6%	45,775	25.3%	95,006	27.3%
Farming, fishing, and forestry	0	0.0%	237	3.3%	225	3.1%	8,818	4.9%	10,869	3.1%
Construction, extraction, and maintenance	51	9.6%	772	10.9%	798	11.1%	13,940	7.7%	28,589	8.2%
Production, transportation, and material moving	17	3.2%	626	8.8%	639	8.9%	17,425	9.6%	39,955	11.5%
<b>Total</b>	<b>533</b>	<b>100.0%</b>	<b>7,115</b>	<b>100.0%</b>	<b>7,192</b>	<b>100.0%</b>	<b>180,716</b>	<b>100.0%</b>	<b>348,338</b>	<b>100.0%</b>
<i>Industry</i>										
Agriculture, forestry, fishing and hunting, and mining	50	9.4%	242	3.4%	214	3.0%	12,094	6.7%	14,265	4.1%
Construction	49	9.2%	714	10.0%	700	9.7%	10,773	6.0%	21,946	6.3%
Manufacturing	28	5.3%	858	12.1%	828	11.5%	17,482	9.7%	48,154	13.8%
Wholesale trade	6	1.1%	495	7.0%	493	6.9%	5,912	3.3%	13,811	4.0%
Retail trade	60	11.3%	647	9.1%	676	9.4%	20,347	11.3%	38,539	11.1%
Transportation and warehousing, and utilities	22	4.1%	184	2.6%	216	3.0%	5,214	2.9%	11,385	3.3%
Information	16	3.0%	191	2.7%	203	2.8%	5,347	3.0%	14,639	4.2%

	Ventura County Portion of Study Area		Santa Barbara Portion of Study Area		City of Carpinteria		Santa Barbara County		Ventura County	
Finance, insurance, real estate, and rental and leasing	62	11.6%	448	6.3%	440	6.1%	9,755	5.4%	28,328	8.1%
Professional, scientific, management, administrative, and waste management services	75	14.1%	798	11.2%	762	10.6%	19,514	10.8%	38,476	11.0%
Educational, health and social services	91	17.1%	1,233	17.3%	1,301	18.1%	38,399	21.2%	59,820	17.2%
Arts, entertainment, recreation, accommodation and food services	13	2.4%	735	10.3%	748	10.4%	18,409	10.2%	23,669	6.8%
Other services (except public administration)	35	6.6%	347	4.9%	390	5.4%	9,823	5.4%	16,377	4.7%
Public administration	26	4.9%	223	3.1%	221	3.1%	7,647	4.2%	18,929	5.4%
<b>Total</b>	<b>533</b>	<b>100.0%</b>	<b>7,115</b>	<b>100.0%</b>	<b>7,192</b>	<b>100.0%</b>	<b>180,716</b>	<b>100.0%</b>	<b>348,338</b>	<b>100.0%</b>
<b>Class of Worker</b>										
Private wage and salary	338	63.4%	5,297	74.4%	5,327	74.1%	131,401	72.7%	265,224	76.1%
Government	93	17.4%	910	12.8%	977	13.6%	29,383	16.3%	50,193	14.4%
Self-employed (not incorporated business)	91	17.1%	908	12.8%	888	12.3%	19,361	10.7%	31,536	9.1%
Unpaid family	11	2.1%	0	0.0%	0	0.0%	571	0.3%	1,385	0.4%
<b>Total</b>	<b>533</b>	<b>100.0%</b>	<b>7,115</b>	<b>100.0%</b>	<b>7,192</b>	<b>100.0%</b>	<b>180,716</b>	<b>100.0%</b>	<b>348,338</b>	<b>100.0%</b>

Source: US Bureau of the Census, 2000, Table DP-3, Profile of Selected Economic Characteristics.

The Ventura County portion of the study area showed higher proportions of management, professional, sales, and office occupations, but lower proportions of service; farming, fishing, forestry, construction, extraction and maintenance, production, transportation, and material moving occupations than those within the City of Carpinteria. The area also showed proportionately higher numbers of people employed in agriculture, forestry, fishing and hunting, mining, retail trade, finance, insurance, real estate, rental and leasing, professional, scientific, management, administrative, and waste management services but lower proportions of people employed in manufacturing, wholesale trade, arts, entertainment, recreation, accommodation and food service than the City of Carpinteria.

The breakdown of occupation and industry for both Santa Barbara and Ventura Counties was generally similar to the City of Carpinteria, with minor exceptions. Specifically, the proportion of employed persons in Santa Barbara County was lower than that of both the City of Carpinteria and Ventura County.

### Household Income

Table 2.1-7 illustrates Median Household Income (MHI) and Per Capita Income. MHI is defined as the middle value of all incomes ranging from highest to lowest in a selected

geographic area. As of 2000, MHI within the study area ranged between \$39,464 and \$67,743 (US Census Bureau, 2000). Higher MHI values were located in the northernmost portions study area in the City of Carpinteria, as well as in northern Ventura County. Conversely, lower MHI values were located within eastern portions of the City of Carpinteria. In comparison, as of 2000, MHIs for Santa Barbara and Ventura Counties were \$46,677 and \$59,666, respectively.

The study area is shown to have a wider range of MHI values than that of the surrounding region. Between 1990 and 2000, MHI within the study area increased at a relatively higher rate (36.1- 40.5 percent) than that of the region (30.8 percent). The most notable increase was experienced in the area of the City of Carpinteria, where MHI increased by \$12,975 over the decade.

Per capita income (PCI) is defined as the average income of every resident of a selected geographic area, including all adults and children, and is often used as a measure of the wealth of a selected population. As of 2000, the average PCI in the study area was \$25,706, with the highest PCI levels (\$38,249) found in the Ventura County portion of the study area, and the lowest PCI levels (\$18,437) found in the eastern area of Carpinteria. In both 1990 and 2000, PCI within the study area remained markedly higher than that of both Santa Barbara and Ventura Counties. Following the Office of Management and Budget's Directive 14, the U.S. Census Bureau uses a set of income thresholds that vary by family size and composition to define poverty status. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is classified as being "below the poverty level."

As of 2000, 9.1 percent of the population of the study area was considered to be below the poverty level. Values ranged from 9.1 percent to 11.9 percent in the Santa Barbara County portion of the study area, and 4.5 percent in the Ventura County portion. All respective levels within the study area were substantially below Santa Barbara and Ventura County averages, at 14.3 percent and 9.2 percent, respectively.

**Table 2.1-7 Median Household Income and Per Capita Income 1990-2000**

	Study Area	Santa Barbara	Ventura
<b>2000</b>			
Median Household Income	\$39,464 - \$67,743	\$46,677	\$59,666
Per Capita Income	\$25,706	\$23,059	\$24,600
<b>1990</b>			
Median Household Income	\$28,978 - \$48,194	\$35,677	\$45,612
Per Capita Income	\$20,208	\$17,155	\$17,861

*Source: US Bureau of the Census, 2000, Table DP-3, Profile of Selected Economic Characteristics.*



### ***Business Activity***

Businesses are located within the City of Carpinteria, La Conchita, and Mussel Shoals. Restaurants, grocery stores, and business centers are located within the City of Carpinteria. Within La Conchita, the only business activity is generated by the produce stand. The Cliff House Inn and Shoals Restaurant provides the only business activity within Mussel Shoals.

### ***Community Facilities/Services***

#### ***Schools and Libraries***

The Carpinteria Unified School District administers three elementary schools, one junior high school, and one high school. Library service is provided to the City of Carpinteria through the Carpinteria Library. No schools are located within the Ventura County portion of the study area; however, the Ventura Unified School District, located in the City of Ventura, includes 17 elementary schools, four middle schools, 7 high schools, one day school, and one adult school.

#### ***Emergency Services***

Fire protection within the study area is provided by the Carpinteria-Summerland Fire Protection District, which serves the areas of Carpinteria and Summerland, and the Ventura County Fire Department Station 25, which serves the Ventura County portion of the study area. Police protection is provided by the City of Carpinteria Police Department, as well as the Santa Barbara and Ventura County Sheriff's Departments. Additionally, because the study area does not support a high population density, there are no major hospitals located within the study area. Urgent care facilities and medical clinics, including Sansum Clinic and County Health Clinic, are available in the City of Carpinteria.

#### ***Utilities***

Domestic water services in the study area are provided by the Carpinteria Valley Water District and the Casitas Municipal Water District. Wastewater collection and treatment services are provided by the Carpinteria Sanitary District and by septic systems in the unincorporated areas of Santa Barbara and Ventura Counties. According to the Coastal Area Plan for Ventura County (2001), a sewer system is being designed for the northern portions of Ventura County; however, a system has yet to be installed. Natural gas services in the study area are provided by the Southern California Gas Company and electricity is provided by Southern California Edison. Five Fiber optic lines exist parallel to the railroad tracks within the Union Pacific Railroad property on either side of the railroad tracks in the La Conchita area.

### **Environmental Consequences**

No temporary or long-term impacts to emergency services are anticipated as a result of the proposed project. While the median crossings would be closed at both Mussel Shoals and La Conchita, emergency gate access would be provided. All other access routes used by emergency vehicles to communities within the study area would not be affected by the proposed project. Additionally, reduction of congestion and improvements to travel times along U.S. 101 would likely improve emergency access and response times within the region and is considered to represent an incrementally positive impact from the proposed project.

The proposed project would not eliminate or restrict automobile or pedestrian access to stores, public services, schools, or other facilities within the study area. The proposed project is designed to alleviate congestion along U.S. 101 through the inclusion of additional HOV lanes.

No regional or community-level impacts are anticipated to occur with implementation of the alternatives. No residences, businesses or community facilities would be displaced as a result of the proposed project and population characteristics and distribution within the study area would not change. The proposed project would not result in any growth inducing impacts. The proposed project would not put any additional pressure on existing community facilities, through an increase in resident populations or visitors, or through the loss of other community facilities elsewhere. No regional or community-level impacts are anticipated. No neighborhoods would be divided or separated from existing community facilities.

### **NO BUILD Alternative**

Under the NO BUILD Alternative, existing conditions would remain and no impacts to emergency services or utilities would occur. However, existing congestion along U.S. 101 would not be alleviated, projected growth in the area would not be accommodated, and safety would not be improved along the roadway with implementation of the NO BUILD Alternative.

### **BUILD Alternatives**

Utilities such as the fiber optic lines or telephone poles may need protection in place or realignment to avoid conflicts during construction. No temporary or long-term impacts to emergency services are anticipated as a result of the proposed project. While the median crossings would be closed at Mussel Shoals, La Conchita, and Tank Farm, emergency gate access would be provided. Implementation of the vast majority of the

proposed project would occur within existing right-of-way, A portion of the existing parking at the Cliff House Inn in Mussel Shoals is located on Old Coast Highway. Implementation of the BUILD alternative may result in the loss or temporary loss of parking in front of the Cliff House Inn.

### **Avoidance, Minimization and/or Mitigation Measures**

Based on the above discussion and analysis, the implementation of the proposed project would not cause substantial impacts to public services within the study area.

- If protection or relocation of the utilities would be required, early coordination and communication with the utility provider would occur so there would be no disruption of services.
- For loss of private parking spaces, the property owner would be compensated.

### **2.1.9 Environmental Justice**

#### **Regulatory Setting**

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President Bill Clinton on February 11, 1994. This Executive Order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse impacts of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2008, this was \$21,200 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. The Department's commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in Appendix C of this document.

#### **Affected Environment**

As shown in Table 2.1-8, none of the affected communities have markedly higher levels of non-white or Hispanic populations compared to the surrounding region with the exception of the southern area of Carpinteria. In the Rincon area, La Conchita, and Mussel Shoals, the total non-white population is much lower than the Ventura County

average. Similarly, the total Hispanic population within these communities is much lower than the Ventura County average.

The proportion of the population below the poverty line within the overall study area is lower than the Santa Barbara County average and is consistent with the Ventura County average. However, Hispanic populations within the southern area of Carpinteria as a proportion of the total population are proportionally higher than the City of Carpinteria average but substantially higher than the Santa Barbara County average. The total minority population within the southern area of Carpinteria is also markedly higher than the Santa Barbara County average.

## **Environmental Consequences**

### ***NO BUILD Alternative***

Under the NO BUILD Alternative, existing conditions would remain and no environmental justice impacts would occur. However, existing congestion along U.S. 101 would not be alleviated, projected growth in the area would not be accommodated, and safety would not be improved along the roadway with implementation of the NO BUILD Alternative.

### ***BUILD Alternatives***

Based on the above analysis, the southern area of Carpinteria is considered to be a minority Hispanic population. No other minority populations and no low-income populations are considered to occur within the study area. Potential aesthetic, air quality, noise, and community character impacts to the southern area of Carpinteria have been identified.

Air quality and noise impacts associated with construction of the soundwalls would affect the southern area of Carpinteria. However, air quality and noise impacts associated with construction of soundwalls at Mussel Shoals would also occur, so no disproportionately high and adverse air quality and noise impacts would occur to the southern area of Carpinteria. The affect on air quality is discussed in the air quality section 2.2.6.

**Table 2.1-8 Minority Populations and Income 1990-2000**

	<b>Southern Area of Carpinteria</b>	<b>Rincon Point</b>	<b>Rincon Hills</b>	<b>La Conchita</b>	<b>Mussel Shoals</b>	<b>Santa Barbara Portion of Study Area</b>	<b>Ventura County Portion of Study Area</b>	<b>Study Area Overall</b>	<b>City of Carpinteria</b>	<b>Santa Barbara County</b>	<b>Ventura County</b>
Total Population	2,984	146	87	338	92	14,369	972	15,341	14,194	399,347	753,197
Non-White	791 (26.5%)	10 (6.8%)	5 (5.7%)	34 (10.1%)	10 (10.9%)	3,798 (26.4%)	99 (10.2%)	3,897 (25.4%)	3,776 (26.6%)	108,929 (27.3%)	226,476 (30.1%)
Hispanic	1,432 (48.0%)	3 (2.1%)	12 (13.8%)	52 (15.4%)	4 (4.3%)	6,174 (43.0%)	82 (8.4%)	6,256 (40.8%)	6,175 (43.5%)	136,668 (34.2%)	251,734 (33.4%)
Total Minority	1,642 (55.0%)	10 (6.8%)	16 (18.4%)	57 (16.9%)	11 (12.0%)	6,944 (48.3%)	147 (15.1%)	7,091 (46.2%)	6,928 (48.8%)	172,264 (43.1%)	325,748 (43.2%)
Below Poverty Level	N/A	N/A	N/A	N/A	N/A	1,475 (9.1 to 11.9%)	37 (4.5%)	1,512 (4.5 to 11.9%)	1,480 (10.4%)	55,085 (14.3%)	68,540 (9.2%)
Median Household Income	N/A	N/A	N/A	N/A	N/A			\$39,464-\$67,743	\$47,729	\$46,677	\$59,666

**Source:** US Bureau of the Census, 2000, Table DP-1, Profile of General Demographic Characteristics; Table DP-3, Profile of General Demographic Characteristics; Table QT-P4, Race, Combinations of Two Races, and Not Hispanic or Latino.

N/A = Data not available at the block level of analysis.

Views of the proposed project from residences within the southern area of Carpinteria, specifically the additional HOV lanes, could incrementally affect the existing community character potentially through an increased sense of urbanization surrounding the community. Additionally, the proposed soundwalls within southern area of Carpinteria along the roadside, while abating traffic noise levels, would create a defined ‘barrier’ between the northern part of the community and the roadway, incrementally changing the community character. Moreover, inclusion of soundwalls would block existing limited ocean views. The linear nature of the proposed project would incrementally increase the sense of urbanization surrounding all affected communities within the project area.

Implementation of the proposed project would not cause potentially high and adverse aesthetic and community character impacts to minority populations within the southern area of Carpinteria because similar impacts resulting from soundwalls would occur in La Conchita; therefore, these impacts would not be considered disproportional. No additional regional or community-level impacts would occur.

***Avoidance, Minimization and/or Mitigation Measures***

Based on the above discussion and analysis, the proposed project would not potentially cause disproportionately high and adverse impacts to the southern area of Carpinteria, which is considered to be a minority population, with the implementation of soundwalls from either of the alternatives.

The recommendation on noise abatement measures is made by the Department, the project proponent; however, an avoidance measure can be considered from the results of the reasonableness determination and information collected during the public input process. The opinions of affected property owners would be considered in reaching a final decision on the noise abatement measures to be provided. Noise abatement within state right-of-way would not be provided if more than 50 percent of the affected property owners do not want it.

Provision of offsetting benefits and opportunities to enhance communities would also be considered. Such views would be carefully considered when mitigation strategies are developed to minimize the potential impacts. The Department’s staff would participate as needed in meetings with neighborhood associations, residents and property owners from the outset of project planning and would continue to participate in these meetings through the environmental review process.

Consistent with Federal Highway Administration Actions to Address Environmental Justice in Minority Population and Low-Income Populations, the project would be carried out only if “further mitigation measures or alternatives that would avoid or reduce the

disproportionately high and adverse impacts are not practicable. In determining whether a mitigation measure or an alternative is “practicable,” the social, economic (including costs) and environmental impacts of avoiding or mitigating the adverse impacts would be taken into account (USDOT1998).

### **2.1.10 Traffic and Transportation/Pedestrian & Bicycle Facilities**

#### **Regulatory Setting**

The Department, as assigned by the Federal Highway Administration, directs that full consideration should be given to the safe accommodation of pedestrians and cyclists during the development of federal-aid highway projects (see 23 Code of Federal Regulations 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental impacts on all highway users who share the facility.

The Department is committed to carrying out the 1990 Americans with Disabilities Act by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

#### **Affected Environment**

U.S. 101 is part of the National Highway System (NHS) and serves as an Interstate/Inter-regional/Intra-regional and commute travel route. The roadway portion in Ventura County is classified as an expressway and the Santa Barbara portion is classified as a freeway.

According to the City of Carpinteria General Plan and Local Coastal Plan, the automobile is the primary form of travel for local residents. Circulation throughout the study area is provided primarily via U.S. 101, although State Route (SR) 150 provides another (longer) option to connect to Ventura County. U.S. 101 is a major north-south transportation corridor heavily used by daily commuters. It is known as the Ventura Freeway for a portion of this route within the study area, and it parallels the Pacific Ocean and merges with State Route 1 for 54 miles. It has been designated by the Department as an eligible state scenic highway (CSHMS, 2007). U.S. 101 serves as the principal intercity arterial highway connecting cities between Los Angeles and San Francisco and within the study area, serves as the primary link between Santa Barbara and Ventura Counties. In addition to traversing two counties, the segment of U.S. 101 within the study area passes the



communities of Mussel Shoals, La Conchita, and Rincon Point, as well as the southern area of the City of Carpinteria.

The Ventura/Santa Barbara 101 HOV Traffic study was used to determine the operational benefits of the proposed improvements during peak traffic volume conditions on the highway, while also considering the traffic conditions at the interchange intersections. Furthermore, this study will analyze the impacts to motorists from Mussel Shoals and La Conchita as a result of proposed median closures. To quantify such impact, it is more appropriate to use peak hour turning movement data for these locations. As such, we determined that mainline traffic volumes should be based on the peak hours of U.S. 101, and interchange traffic volumes should be based on the peak hours of the interchanges. This approach will result in a conservative data set and ensures that the peak traffic conditions for the two study components are evaluated accurately.

### **Forecasted Traffic Volumes**

The Department's policy is to maintain freeway mainline and ramp operations at LOS based on the *Guide for the Preparation of Traffic Impact Studies* (The Department's, December 2002).

The project study area is experiencing an average traffic growth rate of 1.05% to 1.30% annually and long distance commuters are increasing, as affordable housing is located further away from business and employment centers.

The Santa Barbara County Association of Governments (SBCAG) regional travel model was used to develop annualized growth rates on the U.S. 101 mainline and ramps. Based on total daily traffic forecasts for Year 2005 and Year 2030, a 1.8 percent annually compounded growth rate was used to develop traffic forecasts for the Year 2015 (representing the project opening year) and Year 2035. This growth rate was applied to Year 2008 traffic counts.

### ***Intersections/Ramp Operation***

Peak period intersection counts were conducted during the morning (7:00 to 9:00AM) and evening (4:00 to 6:00PM) at the nine study intersections during a typical weekday (Tuesday through Thursday) in April 2008. The data includes peak hour intersection turning movements and cyclist and pedestrian volumes. The count data indicates that the AM and PM peak hours vary among locations, further justifying the need to use site-specific peak hour volumes at the intersections.

During field reconnaissance, lane configurations, turning movement pocket lengths, and speed limits were collected. The peak hour volumes presented in this report reflect minor

adjustments to the raw traffic counts to ensure balanced vehicle trips between adjacent intersections.

Key assumptions were developed to analyze the intersections. A peak hour truck percentage of 7 percent was used for U.S. 101. A peak hour truck percentage of 2 percent was used for all ramps. A free-flow speed of 65 mph was used for the freeway mainline and 45 mph for the ramps. Analysis peak hours were from 7:00 to 8:00 AM and 4:45 to 5:45 PM. Peak hour intersection turning movement volumes, which occurred between 7:00 and 9:00 AM or 4:00 and 6:00 PM, were superimposed onto the mainline peak hour volumes.

In order to determine the current operations, peak hour capacity analyses were performed for each intersection, ramp junction, and mainline freeway segment. The peak hour signal warrant was also evaluated for unsignalized intersections based on the *Manual on Uniform Traffic Control Devices* (MUTCD) (United States Department of Transportation and Federal Highway Administration, 2003).

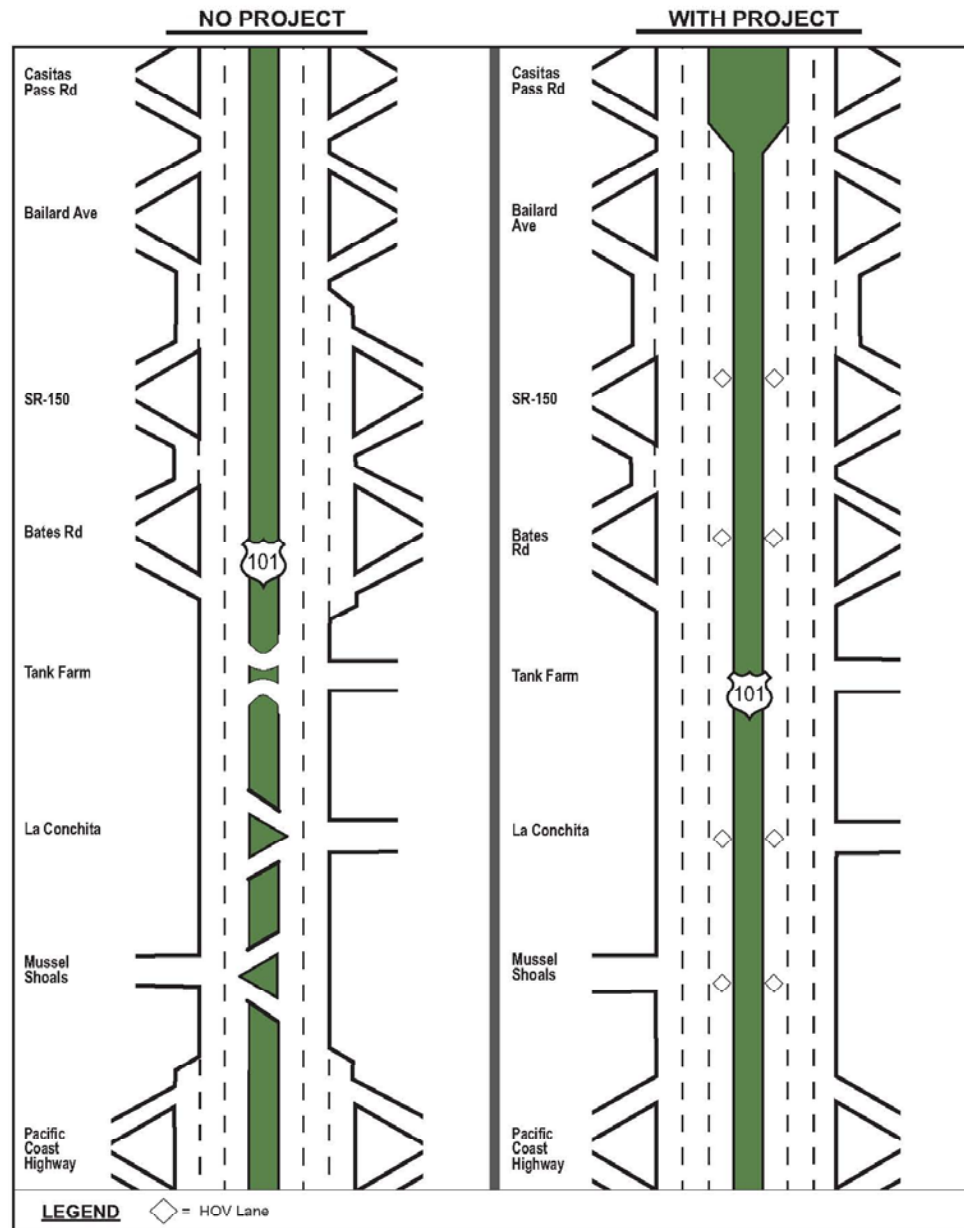
At side-street stop-controlled intersections, the LOS rating is based on the control delay for each minor movement. For all-way stop-controlled intersections, the LOS rating is based on the weighted average control delay of all movements. The traffic analysis software Synchro 6.0 was used for this study. Synchro is based on procedures outlined in the Transportation Research Board's 2000 *Highway Capacity Manual* (HCM).

#### *Cartographic orientation of the intersection*

Throughout the majority of the study area, the US 101 follows the coastline and generally has a northwest-southeast orientation, though the highway does meander and change orientation. For the purposes of this study, US 101 is assumed to be a north-south facility, and all mainline segments, ramps, and intersections conform to this convention. This approach simplifies the mainline analysis by assuming all traffic traveling from the Seacliff interchange towards Carpinteria is northbound, and vice-versa. According to this convention, the Mussel Shoals access, located on the ocean-side of US 101, is oriented east-west. For example, at Mussel Shoals an "eastbound left turn" is a movement that allows trips to access northbound US 101, while the cartographic orientation of the intersection would suggest the movement is a northbound left turn. Similarly at La Conchita, the access is assumed to be oriented east-west.

### Existing Mainline Configuration

Please refer to the description contained in Section 1.1 Introduction, under Existing Facility.



Source Fehr and Peers Traffic Analysis Report July 2008

**Figure 2.1-5 Mainline and Ramp Configuration**

Table 2.1-9 lists the locations that were studied to evaluate traffic circulation impacts as a result of the proposed project.

**Table 2.1-9 Traffic Study Locations at Various Locations**

Mainline Analysis	
NB US 101 Seacliff to Mussel Shoals Access	SB US 101 Bailard Avenue to SR-150
NB US 101 La Conchita Access to Bates Road	SB US 101 SR-150 to Bates Road
NB US 101 Bates Road to SR-150	SB US 101 Bates Road to La Conchita Access
NB US 101 SR-150 to Bailard Avenue	SB US 101 Mussel Shoals to Seacliff
Ramp or Junction Analysis	
NB US 101 PCH Off-Ramp	SB US 101 SR-150 Off-Ramp
NB US 101 PCH On-Ramp	SB US 101 SR-150 On-Ramp
NB US 101 Bates Road Off-Ramp	SB US 101 Bates Road Off-Ramp
NB US 101 Bates Road On-Ramp	SB US 101 Bates Road On-Ramp
NB US 101 SR-150 Off-Ramp	SB US 101 PCH Off-Ramp
NB US 101 SR-150 On-Ramp	SB US 101 PCH On-Ramp
Intersection Analysis	
1. US 101 SB Ramp/Pacific Coast Highway (PCH) – Seacliff	6. Bates Road/US 101 SB Ramps
2. US 101 NB Ramp/Pacific Coast Highway (PCH) – Seacliff	7. Bates Road/US 101 NB Ramps
3. Mussel Shoals Access/US 101	8. SR-150/US 101 SB Ramps
4. Santa Barbara Avenue/US 101	9. SR-150/US 101 NB Ramps
5. Tank Farm/US 101	

Source: Fehr and Peers Traffic Analysis Report July 2008

### **Freeway Mainline Operation**

Peak hour traffic counts were conducted for the mainline (U.S. 101) near La Conchita and Mussel Shoals. The traffic volumes indicated that the predominant travel direction is northbound during the AM peak period (7:00 to 8:00 AM) and southbound during the PM peak period (4:45 to 5:45 PM).

The Department's traffic data from 2006 indicates that the Average Annual Daily Traffic (AADT) for 2006 is 74,000 vehicles per day (vpd) in Ventura County and 82,000 vpd in Santa Barbara County. There are periods of peak seasonal traffic that typically coincide with summer months and include considerable weekend traffic.

Mainline traffic operations on U.S. 101 reflect local commuting patterns with reduced LOS during the AM peak in the northbound direction; this pattern is mirrored in the PM peak with higher congestion levels in the southbound direction. Between Seacliff exit and

Bailard Avenue, northbound U.S. 101 generally operates at LOS C during the AM peak. During the PM peak, southbound U.S. 101 operates at LOS C between Bailard Avenue at Bates Road, and at LOS D between Bates Road and Seacliff exit.

Table 2.1-10 illustrates traffic conditions in two counties. Since the project spans two counties and the traffic conditions are slightly different.

**Table 2.1-10 Existing Traffic Conditions by County**

U.S 101 Location	2006 AADT	Peak Hour VPLPH	Average Peak demand VPHPL	LOS
Ventura County (PM39.8/43.6)	74,000 vehicles	7,400 vehicles total	1,850 vehicles per lane	E
Santa Barbara County (PM 0.0/2.2)	82,000 vehicles	8,200 vehicles total	1,822 vehicles per lane	E

Source: The Department's 2007 Traffic Analysis Report

As shown in Table 2.1-11, for the purposes of environmental analysis, the worst traffic condition (82,000 AADT in Santa Barbara County) was used. The average annual peak month traffic in 2006 was 82,000 vehicles and the peak hour demand was 8,200 vehicles. The vehicles per hour per lane (VPHPL) was estimated to be 1,822 vehicles, with a VPHPL capacity of 2,000 vehicles and LOS E which means there is unstable traffic flow, greatly varied speeds and unpredictable flow. Traffic in the vicinity of the project has an average of 6-7% truck traffic.

**Table 2.1-11 Existing and Future Traffic Volumes with Alternatives**

Condition	Lanes	Average Annual Peak month Traffic	AM/PM Peak Hour Traffic	Demand Vehicles per hour per lane	Capacity Vehicles per hour per lane	LOS	Vehicle hours
EXISTING 2006	4 Mixed Flow*	82,000	8,200	1,822	2,000	E	N/A
NO BUILD 2036	4 Mixed Flow*	121,161	12,116	2,692	2,000	F	834,165 vehicle hours delay
BUILD 2036	4 Mixed Flow + HOV	121,161	12,116	1954	2,200	D	834,165 vehicle hours saved

Source The Department's 2007 Traffic Analysis Report

Note: \* Existing and NO BUILD Facility accounts for four mixed flow lanes with a short section of 3 mixed flow lanes northbound between Bates Road and the 101/150 IC and an auxiliary lane within the same southbound section. In the BUILD scenario the additional mixed flow lane would remain and the auxiliary lane would be converted to a mixed flow lane. HOV capacity used is 85% of maximum capacity of Mixed Flow lane (2000 VPHPL) or 1700 VPHPL.

The peak month traffic in 2036 is expected to increase by 50 percent to 121,161 vehicles (AADT) and the peak hour demand is expected to be 12,116 vehicles (peak hour

volume). The expected VPHPL under the NO BUILD alternative would be 2,692 vehicles.

The NO BUILD Alternative would not improve capacity therefore the highway would exceed the maximum design capacity (2,000 VPHPL) and create LOS F conditions and would result in 834,165 vehicle hours of delay.

The MINIMUM and FULL BUILD Alternatives would increase capacity and increase VPHPL capacity from 2,000 to 2,200 and the free-flow speed from 50 mph to 60 mph. the VPHPL is expected to be 1,954 vehicles with LOS D and would result in 834,165 vehicle hours of delay saved.

U.S. 101 would operate at LOS F in the northbound direction during the AM peak hour from Seacliff exit to the Bates Road Interchange. Southbound, traffic operations would degrade to LOS F or worse from Bailard Avenue to Seacliff exit during the PM peak hour.

The LOS for a freeway section is based on measures of density (vehicle/mile/lane), while a secondary measure is travel speed (mph). Freeway LOS is a qualitative description of traffic flow based on speed, travel time, delay, and freedom to maneuver. There are six levels, ranging from LOS A (i.e. the best operating conditions) to LOS F (i.e. the worst). LOS E represents “at-capacity” operation. When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F.

**Table 2.1-12 Intersection Level of Service (LOS) Thresholds**

LOS	Unsignalized Intersection Control Delay (sec/veh) <sup>1</sup>	General Description
A	0 – 10.0	Little to no congestion or delays.
B	10.1 – 15.0	Limited congestion. Short delays.
C	15.1 – 25.0	Some congestion with average delays.
D	25.1 – 35.0	Significant congestion and delays.
E	35.1 – 50.0	Severe congestion and delays.
F	> 50.0	Total breakdown with extreme delays.

Source: *Fehr and Peers Traffic Analysis Report July 2008*

Existing intersection conditions were evaluated based on lane configurations and traffic volumes as shown in Tables 2.1-13 . All of the study intersections operate at LOS C or better during both peak hours, except at the following locations:

- *Mussel Shoals Access/U.S. 101* – The eastbound approach currently operates at LOS D during the AM peak hour and LOS F during the PM peak hour.
- *Santa Barbara Avenue/U.S. 101* – The westbound approach currently operates at LOS F during the AM peak hour and LOS D during the PM peak hour.
- *SR-150/U.S. 101 Southbound Ramps* – The southbound (off-ramp) approach currently operates at LOS E during the PM peak hour.

**Table 2.1-13 Existing Intersection Analysis - 2008**

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay (sec/veh)	LOS <sup>1</sup>	Delay (sec/Veh)	LOS <sup>1</sup>
1. U.S. 101 Southbound Ramp/PCH (Seacliff)	Side-Street Stop	9 (EB)	A	9 (EB)	A
2. U.S. 101 Northbound Ramp/PCH (Seacliff)	Side-Street Stop	9 (EB)	A	9 (EB)	A
3. Mussel Shoals Access/U.S. 101	Side-Street Stop	28 (EB)	D	212 (EB)	F
4. Santa Barbara Avenue/U.S. 101	Side-Street Stop	70 (WB)	F	26 (WB)	D
5. Tank Farm/U.S. 101	Side-Street Stop	< 5 (WB)	A	20 (WB)	C
6. Bates Road/U.S. 101 Southbound Ramps	Side-Street Stop	9 (SB)	A	9 (SB)	A
7. Bates Road/U.S. 101 Northbound Ramps	Side-Street Stop	9 (NB)	A	9 (NB)	A
8. SR-150/U.S. 101 Southbound Ramps	Side-Street Stop	12 (SB)	B	40 (SB)	E
9. SR-150/U.S. 101 Northbound Ramps	Side-Street Stop	11 (NB)	B	12 (NB)	B
<i>Notes:</i> Shading denotes locations where LOS threshold is exceeded. <sup>1</sup> Side-street stop intersection LOS is based on worst approach control delay per vehicle, according to 2000 Highway Capacity Manual. The values shown represent seconds delay per vehicle.					

Source: Fehr and Peers Traffic Analysis Report July 2008

The LOS results reflect typical traffic conditions and have not been adjusted to represent summer conditions.

### **Median Closure**

The project alternatives would restrict left turns into and out of Mussel Shoals and La Conchita and U-turns at Tank Farm by closing the median openings. In future project scenarios, drivers using the existing median openings were assumed to reroute to the nearest interchange, reverse direction on U.S. 101, and use the right-in right-out access. For example, a driver who used the median opening at La Conchita to make a southbound left turn would reroute to the U.S. 101/PCH interchange (Seacliff), enter northbound U.S. 101 and turn right into La Conchita. The resulting median closures would generate additional travel time for drivers to reroute to the nearest interchange, though in some



cases the rerouted travel time is expected to be less than the wait time to turn onto U.S. 101 through the median openings under NO BUILD conditions.

### **Bikeways**

Within the project limits, there are existing bikeways located adjacent to the outside traffic lanes along most of northbound and southbound U.S.101. In the northbound direction, there is a bikeway on the outside shoulder from where the Old Coast Highway ends, until the U.S 101/SR 150 Interchange where cyclists must exit the highway. In the southbound direction, the bikeway begins at the U.S. 101/SR 150 Interchange to the southern project limits. These lanes are part of the Pacific Coast Bicycle Route, which provides a north/south connection for cyclists between Vancouver, British Columbia, Canada to Imperial Beach in San Diego, California (Adventure Cycling Association, 2007). Some prominent regional cycle groups in the area include Ventura Velo, the Santa Barbara Bicycle Coalition (SBBC), Echelon Santa Barbara Cycling Club, the Carpinteria Cycling Club, and Channel Islands Bicycle Club.

For the most part, the bikeways are separated from the traffic only by striping. However, in the southbound direction from just south of Bates Road Interchange to just north of Mussel Shoals in Ventura County, there is a five-foot bike lane that is separated from the eight-foot highway shoulder by a two-foot no-parking zone. At certain points in both directions, including the communities of La Conchita and Mussels Shoals, cyclists that are continuing straight must share the lane with vehicles that are entering and exiting the highway. Where access is authorized, cyclists enter and exit the highway by using the existing vehicle ramps and other entrances, with the exception of where the northbound Old Coast Highway joins the highway near the southern project limits. At this location, only cyclists have access to the Old Coast Highway, and there is no vehicle onramp.

Because no other roads offer a direct route between the Seacliff Interchange and Carpinteria, cyclists have no alternative route to the U.S. 101. Generally, cyclists ride on the paved outside shoulders of U.S. 101, using the on-/off-ramps at the Bates Road Interchange to bypass the Bates Road Overcrossing. Southbound between Bates Road to Mussel Shoals, a five-foot painted bikeway is adjacent to highway traffic lanes. During the traffic data collection effort, cyclists using U.S. 101 were counted. During the weekday AM peak period, a total of 35 cyclists were observed. During the weekday PM peak period, a total of 15 cyclists were observed.

### **Pedestrian**

Under existing conditions, substantial weekend pedestrian activity was observed traveling between La Conchita and the beach via a drainage culvert under U.S. 101. A Saturday

count conducted from 10:00 AM to 3:00 PM showed that a total of 102 pedestrians went through the culvert; no pedestrians were observed crossing U.S. 101 at the median opening. Construction of a pedestrian undercrossing at La Conchita, proposed as part of the project alternative, would provide beach access for the community and serve the existing demand for such a facility. Design of the PUC would be ADA compliant.

### **Parking**

No parking is allowed on the U.S. 101. However, there is emergency shoulder parking on the expressway near the community of La Conchita and 33 parking spaces in front of the Cliff House Inn located in Mussel Shoals. There are a total of 11 emergency parking only signs (R 8-4) posted on the southbound direction and 7 signs on the northbound direction.

### **Public Transportation**

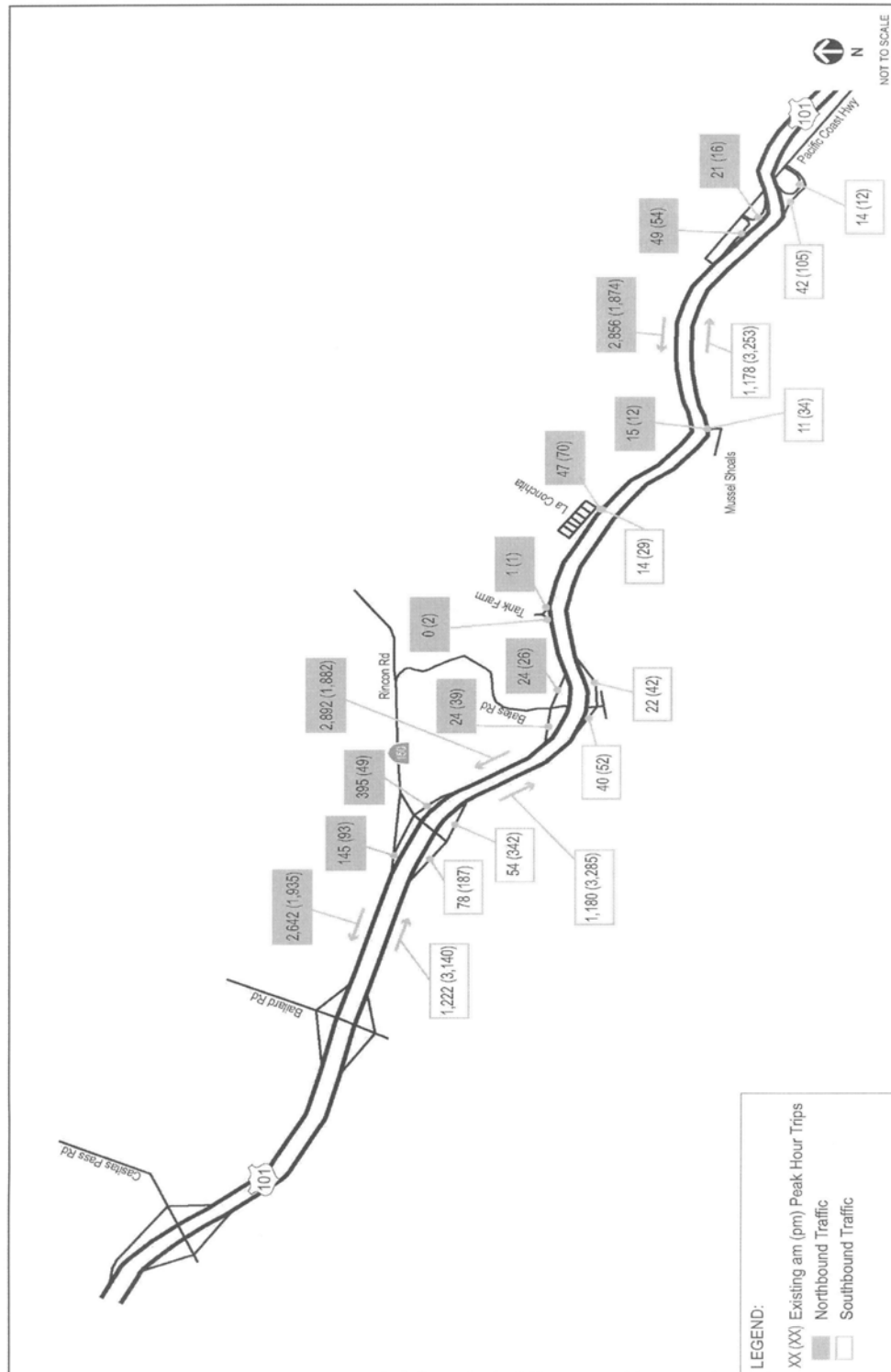
As identified above, the Union Pacific Railroad and Amtrak Pacific Surfliner run generally parallel to U.S. 101 within the study area with a stop in Carpinteria. Other public transportation services offered in the study area include local bus service from MTD Santa Barbara and long distance bus service from Greyhound. The City also operates a shuttle that connects the Santa Barbara's Metropolitan Transit District (MTD) Line 20 and other points of interest within the City. Line 20 travels from the Transit Center on Chapala Street to Via Real at Mark Avenue, primarily along Carpinteria Avenue, and traveling on U.S. 101 for a portion. MTD Santa Barbara connects Carpinteria to the greater Santa Barbara County region via Routes 20 and 21x, with portions of Route 21x traveling along U.S. 101 (MTD, 2008b).

The Ventura County Transportation Commission operates the Ventura Intercity Service Transit Authority (VISTA) Coastal Express which provides 13 round trips from Oxnard/Ventura to Santa Barbara/Goleta (VCTC 2008). The AMTRAK Pacific Surfliner service operates between San Luis Obispo and San Diego, with stops at Carpinteria and Ventura stations. The service has a regular schedule of 8 daily round trips (Amtrak, 2008).

## **Environmental Consequences**

### **Freeway Mainline Operation**

The following summarizes the results of the traffic analysis of mainline traffic operations. Each mainline segment and ramp junction on U.S. 101 was analyzed based on the volumes shown in Figures 2.1-6. Mainline traffic operations on U.S. 101 reflect local commuting patterns with reduced Level of Service (LOS) during the AM peak in the northbound direction; this pattern is mirrored in the PM peak with higher congestion



Source: Fehr and Peers Traffic Analysis Report July 2008

Figure 2.1-6 Existing Mainline Peak Hour Volumes

levels in the southbound direction. Between Seacliff exit and Bailard Avenue, northbound U.S. 101 generally operates at LOS C during the AM peak. During the PM peak, southbound U.S. 101 operates at LOS C between Bailard Avenue at Bates Road, and LOS D between Bates Road and Seacliff.

The HCM methodology does not account for the impacts of downstream blockage or capacity reductions. However, several projects are programed to improve the impacts of the blockage. Several locations along the U.S. 101 corridor experience localized congestion during the peak period. Field observations and travel time runs indicate that northbound vehicle speeds between 7:00 and 8:00 AM slowed substantially near the lane drop upstream from Mussel Shoals and between U.S. 101 interchanges with Bailard Avenue and SR-150. At these locations, the U.S. 101 mainline section changes from three lanes to two, and the merging activity creates congestion and slower speeds during peak periods. Similar congestion points were not observed for SB PM traffic. SB U.S. 101 maintains a two-lane cross section through the study area and thus does not exhibit the same merge conflict points as does NB U.S. 101.

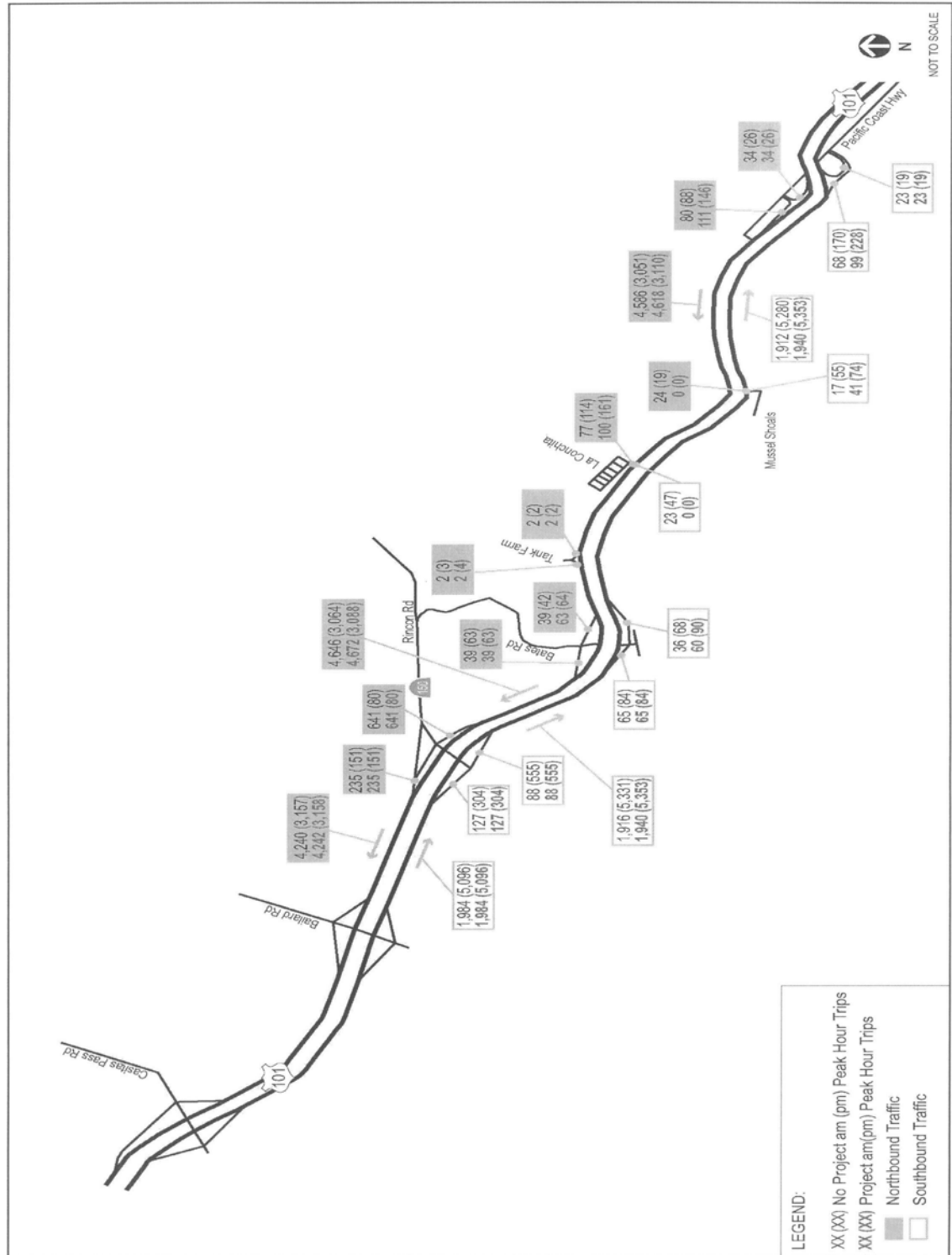
### **MAINLINE LANE UTILIZATION OF HOV LANE**

The proposed HOV lane would accommodate vehicles with two or more occupants. Passenger occupancy counts were collected by the Department in September 2007. The data indicates that approximately 25 percent of existing AM peak period traffic and approximately 28 percent of existing PM peak period traffic had two or more passengers per vehicle. Since these observed occupancy rates reflect existing local trends, it is reasonable to assume future occupancy rates would be similar. Therefore, it was assumed that the HOV lane would carry 25 percent of future AM peak traffic and 28 percent of future PM peak traffic.

### ***NO BUILD Conditions Year 2015***

Under 2015 NO BUILD conditions, the mainline would remain at its current configuration. Therefore, the existing NB congestion during the AM peak hour would continue to occur and likely worsen as volumes increase. NB U.S. 101 would operate at LOS D from Seacliff to the Bates Road Interchange during the AM peak hour. SB traffic operations would degrade to LOS D or worse from Bailard Avenue to Seacliff exit during the PM peak hour and would continue to generate worse LOS conditions.

The following figure, Figure 2.1-7 shows 2015 Peak Hour Traffic Volumes for the NO BUILD and BUILD Alternatives.



Source: Fehr and Peers Traffic Analysis Report July 2008

Figure 2.1-7 2015 Traffic Peak Hour Volumes

The three lane to two lane capacity would not be able to accommodate the peak hour traffic demand of 3,245 vph in the northbound morning and 3,725 vph in the southbound evening. Based on the LOS analysis of six study ramps and five study intersections, and without considering traffic diversion, two intersections at the end of the most constrained part of the project limits would experience severe LOS degradation under NO BUILD conditions during the PM peak hour.

### ***BUILD Conditions Year 2015***

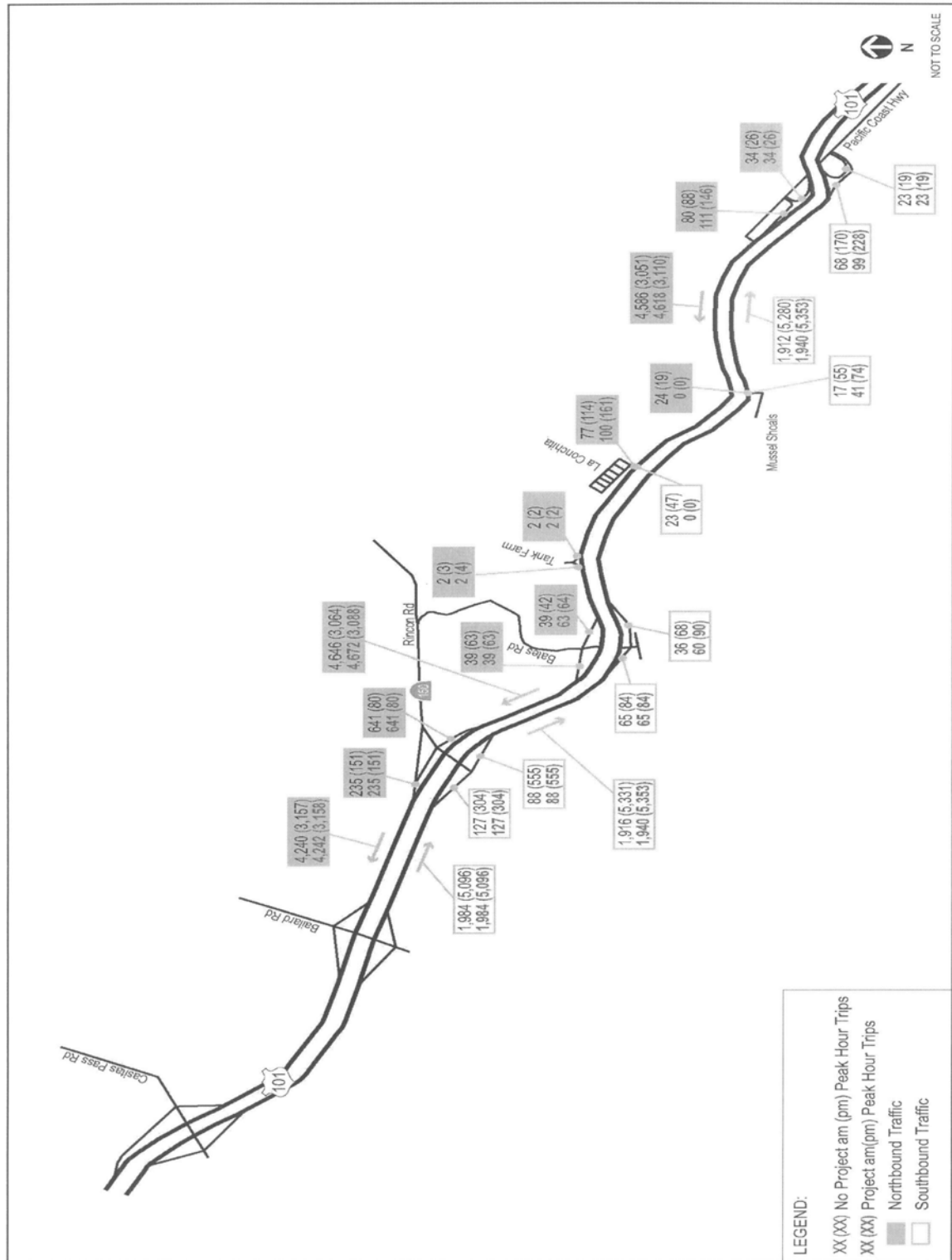
Under 2015 BUILD conditions, the U.S. 101 mainline LOS would improve relative to 2015 NO BUILD conditions, resulting in improved corridor travel time in the peak direction during peak hours. Entering and exiting U.S. 101 at the ramp and junctions addressed in this study would be easier since vehicle densities in the outer two mixed-flow lanes would be less than under 2015 NO BUILD conditions. The final project design would add acceleration and deceleration lanes at Mussel Shoals for vehicles to merge onto and exit the mainline. With the project improvements, Year 2015 traffic conditions on northbound U.S. 101 are projected to improve from LOS D to LOS C from Seacliff to the Bailard Avenue Interchange during the AM peak hour. Southbound, traffic operations would improve from LOS D to LOS C or better from Bailard Avenue to the Seacliff Interchange during the PM peak hour.

### ***NO BUILD Conditions Year 2035***

Under 2035 NO BUILD conditions, the mainline would remain at its current configuration. Therefore, the existing northbound congestion during the AM peak hour would continue to occur and likely worsen as volumes increase. Northbound U.S. 101 would operate at LOS F from Seacliff exit to the Bates Road Interchange and north of the SR-150 Interchange during the AM peak hour. Southbound, traffic operations would degrade to LOS E and F from Bailard Avenue to the Seacliff interchange during the PM peak hour and would continue to generate worse LOS conditions during the PM peak hour.

### ***BUILD Conditions Year 2035***

Under 2035 BUILD conditions, the U.S. 101 mainline LOS would improve relative to 2035 NO BUILD conditions, resulting in improved corridor travel time during peak hours. Entering and exiting U.S. 101 at the ramp and junctions addressed in this study would be easier since vehicle densities in the outer two mixed-flow lanes would be less than under 2035 NO BUILD conditions. The final Project design would add acceleration and deceleration lanes at Mussel Shoals for vehicles to merge onto and exit the mainline. The following figure, Figure 2.1-8 show 2035 Peak Hour Traffic Volumes for the NO BUILD and BUILD Alternatives.



Source: Fehr and Peers Traffic Analysis Report July 2008

Figure 2.1-8 Traffic Peak Hour Volumes – Year 2035



With the project improvements, year 2035 traffic conditions on U.S. 101 are projected to improve from LOS F to LOS D in the northbound direction during the AM peak hour from Seacliff exit to the Bailard Avenue Interchange. Southbound, traffic operations would improve from E and F to LOS D from Bailard Avenue to Seacliff exit during the PM peak hour.

### **Intersection/Ramp Operation**

The study area experiences seasonal traffic fluctuations. Daily traffic volumes are generally higher during the summer months as compared to traffic volumes during the winter months. Traffic Flow charts are contained in Appendix B.

### ***NO BUILD Conditions Year 2015***

The following four study intersections are anticipated to operate at LOS D or worse during the AM and/or PM peak hour under 2015 NO BUILD conditions:

- *Mussel Shoals Access/U.S. 101* – The eastbound approach is projected to operate at LOS D during the AM peak hour and LOS F during the PM peak hour.
- *Santa Barbara Avenue/U.S. 101* – The westbound approach is projected to operate at LOS F during the AM peak hour and LOS D during the PM peak hour.
- *Tank Farm Access/U.S. 101* – The westbound approach is projected to operate at LOS F during the AM peak hour.
- *SR-150/U.S. 101 Southbound Ramps* – The southbound (off-ramp) approach is projected to operate at LOS F during the PM peak hour.

### ***BUILD Conditions Year 2015***

Under 2015 BUILD conditions, the following study intersection is anticipated to operate at similar LOS during the AM and/or PM peak hour relative to NO BUILD conditions:

- *SR-150/U.S. 101 Southbound Ramps* – Essentially unaffected by Project improvements, the southbound (off-ramp) approach is projected to operate at LOS F during the PM peak hour.

The following three study intersections are anticipated to operate at an improved LOS during the AM and/or PM peak hour as a result of BUILD conditions: Table 2.1-14 illustrates 2015 AM/PM peak hour intersection analysis.

- *Mussel Shoals Access/U.S. 101* – The eastbound approach is projected to improve from LOS D to LOS B during the AM peak hour. During the PM peak hour, the eastbound approach is projected to improve from LOS F to LOS D.

- *Santa Barbara Avenue/U.S. 101* – The westbound approach is projected to improve from LOS F to LOS D during the AM peak hour. During the PM peak hour, the westbound approach is projected to improve from LOS D to LOS C.
- *Tank Farm Access/U.S. 101* – The westbound approach is projected to improve from LOS F to LOS C during the AM peak hour.

**Table 2.1-14 AM/PM Peak Hour Intersection Analysis - Year 2015**

Intersection	Traffic Control	Time Period	NO BUILD		BUILD	
			Delay (sec/veh)	LOS <sup>1</sup>	Delay (sec/veh)	LOS <sup>1</sup>
1. US 101 Southbound Ramp/PCH (Seacliff)	Side-Street Stop	AM	9 (EB)	A	9 (EB)	A
		PM	9 (EB)	A	9 (EB)	A
2. US 101 Northbound Ramp/PCH (Seacliff)	Side-Street Stop	AM	9 (EB)	A	9 (EB)	A
		PM	9 (EB)	A	9 (EB)	A
3. Mussel Shoals Access/US 101	Side-Street Stop	AM	34 (EB)	D	12 (EB)	B
		PM	477 (EB)	F	31 (EB)	D
4. Santa Barbara Avenue/US 101	Side-Street Stop	AM	123 (WB)	F	29 (WB)	D
		PM	33 (WB)	D	16 (WB)	C
5. Tank Farms/US 101	Side-Street Stop	AM	52 (WB)	F	24 (WB)	C
		PM	24 (WB)	C	16 (WB)	C
6. Bates Road/US 101 Southbound Ramps	Side-Street Stop	AM	9 (SB)	A	9 (SB)	A
		PM	9 (SB)	A	9 (SB)	A
7. Bates Road/US 101 Northbound Ramps	Side-Street Stop	AM	9 (NB)	A	9 (NB)	A
		PM	9 (NB)	A	10 (NB)	A
8. SR-150/US 101 Southbound Ramps	Side-Street Stop	AM	13 (SB)	B	13 (SB)	B
		PM	80 (SB)	F	80 (SB)	F
9. SR-150/US 101 Northbound Ramps	Side-Street Stop	AM	12 (NB)	B	12 (NB)	B
		PM	13 (NB)	B	13 (NB)	B
Notes: <sup>1</sup> Side-street stop intersection LOS is based on worst approach control delay per vehicle, according to 2000 Highway Capacity Manual. Shading denotes locations where LOS threshold is exceeded.						

Source: Fehr and Peers Traffic Analysis Report July 2008

**NO BUILD Conditions Year 2035**

The following four study intersections are anticipated to operate at LOS D or worse during the AM and/or PM peak hour under Year 2035 NO BUILD conditions:

- *Mussel Shoals Access/U.S. 101* – The eastbound approach is projected to operate at LOS F during the AM and the PM peak hours.
- *Santa Barbara Avenue/U.S. 101* – The westbound approach is projected to operate at LOS F during the AM and the PM peak hours.

- *Tank Farm Access/U.S. 101* – The westbound approach is projected to operate at LOS F during the AM peak hour and LOS E during the PM peak hour.
- *SR-150/U.S. 101 Southbound Ramps* – The southbound (off-ramp) approach is projected to operate at LOS F during the PM peak hour.

### ***BUILD Conditions Year 2035***

- Under 2035 BUILD conditions, the following three study intersections are anticipated to operate at similar LOS during the AM and/or PM peak hour relative to NO BUILD conditions. While the LOS remains constant, the delay decreases substantially.
- *Mussel Shoals Access/U.S. 101* – As with 2035 NO BUILD conditions, the eastbound approach is projected to operate at LOS F during the PM peak hour.
- *Santa Barbara Avenue/U.S. 101* – As with 2035 NO BUILD conditions, the westbound approach is projected to operate at LOS F during the AM peak hour.
- *SR-150/U.S. 101 Southbound Ramps* – As with 2035 NO BUILD conditions, the southbound (off-ramp) approach is projected to operate at LOS F during the PM peak hour. There is no additional delay to vehicles at this location.

The following three study intersections are anticipated to operate at an improved LOS during the AM and/or PM peak hour as a result of BUILD conditions: Table 2.1-15 illustrates the AM/PM Peak Hour Intersection Analysis for year 2035.

- *Mussel Shoals Access/U.S. 101* – The eastbound approach is projected to improve from LOS F to LOS B during the AM peak hour.
- *Santa Barbara Avenue/U.S. 101* – The westbound approach is projected to improve from LOS F to LOS D during the PM peak hour.
- *Tank Farm Access/U.S. 101* – The westbound approach is projected to improve from LOS F to LOS E during the AM peak hour. During the PM peak hour the westbound approach is projected to improve from LOS E to LOS C.

**Table 2.1-15 AM/PM Peak Hour Intersection Analysis - Year 2035**

Intersection	Traffic Control	Time Period	NO BUILD		BUILD	
			Delay (sec/veh)	LOS <sup>1</sup>	Delay (sec/veh)	LOS <sup>1</sup>
1. US 101 Southbound Ramp/PCH (Seacliff)	Side-Street Stop	AM	9 (EB)	A	9 (EB)	A
		PM	9 (EB)	A	10 (EB)	A
2. US 101 Northbound Ramp/PCH (Seacliff)	Side-Street Stop	AM	9 (EB)	A	9 (EB)	A
		PM	9 (EB)	A	9 (EB)	A
3. Mussel Shoals Access/US 101	Side-Street Stop	AM	99 (EB)	F	15 (EB)	B
		PM	> 1,000 (EB)	F	97 (EB)	F
4. Santa Barbara Avenue/US 101	Side-Street Stop	AM	> 1,000 (WB)	F	122 (WB)	F
		PM	130 (WB)	F	28 (WB)	D
5. Tank Farms/US 101	Side-Street Stop	AM	170 (WB)	F	47 (WB)	E
		PM	46 (WB)	E	23 (WB)	C
6. Bates Road/US 101 Southbound Ramps	Side-Street Stop	AM	9 (SB)	A	9 (SB)	A
		PM	9 (SB)	A	9 (SB)	A
7. Bates Road/US 101 Northbound Ramps	Side-Street Stop	AM	9 (NB)	A	10 (NB)	A
		PM	10 (NB)	A	10 (NB)	A
8. SR-150/US 101 Southbound Ramps	Side-Street Stop	AM	19 (SB)	C	19 (SB)	C
		PM	745 (SB)	F	745 (SB)	F
9. SR-150/US 101 Northbound Ramps	Side-Street Stop	AM	16 (NB)	C	16 (NB)	C
		PM	18 (NB)	C	18 (NB)	C
Notes: <sup>1</sup> Side-street stop intersection LOS is based on worst approach control delay per vehicle, according to 2000 Highway Capacity Manual. Shading denotes locations where LOS threshold is exceeded.						

Source Fehr and Peers Traffic Analysis Report July 2008

All study intersections were analyzed under Year 2035 conditions for each project scenario. Year 2035 intersection conditions were evaluated based on traffic volumes and lane configurations.

### **Traffic Signal Warrants**

The peak hour traffic volume signal warrant was evaluated for each of the unsignalized ramp intersections that operate at LOS D or worse during the peak hours. According to

the 2003 Manual on Uniform Traffic Control Devices (MUTCD) criteria, none of the unsignalized intersections meet the peak hour traffic volume signal warrant.

### ***Median Closures***

The median openings for left turns at Mussel Shoals, La Conchita and Tank Farm allow motorists to cross two lanes of opposing traffic to turn left to exit or enter the highway which can be challenging. Closure of the medians would eliminate accidents caused by left turns through the medians. Lengthening of the acceleration and deceleration lanes would improve access for vehicles making right turns to exit and to enter the highway.

The BUILD Alternative would eliminate left turns into and out of Mussel Shoals and La Conchita and U-turns at Tank Farm by closing the median openings. Under NO BUILD conditions, left-turning vehicles are the major contributor to the overall approach delay; therefore, restricting left turns would reduce the average delay for an intersection approach. However, intersection approach delay does not account for additional travel time experienced by drivers who must reroute to the nearest interchange as a result of the median closures.

In future project scenarios, drivers using the median openings in existing conditions were assumed to reroute to the nearest interchange, reverse direction on U.S. 101, reverse direction on the U.S 101, and use the right-in right-out access. For example, a driver who used the median opening at La Conchita to make a southbound left turn would reroute to the U.S. 101/PCH (Seacliff) interchange, enter northbound U.S. 101 and turn right into La Conchita.

The resulting median closures, in certain cases, may generate additional travel time for drivers who reroute. In some cases, reroute travel time is expected to be less than the wait time to turn onto the freeway through the median opening under the NO BUILD conditions. No access impacts would occur to the City of Carpinteria or Rincon Point.

Tables 2.1-16 and 2.1-17 summarizes the additional travel time experienced by drivers required to reroute because of median closures compared to the delay they would incur under 2015 and 2035 NO BUILD conditions. Because of the heavy peak direction traffic volume on U.S. 101, the ability to turn left out of La Conchita and Mussel Shoals depends on the time of day. Under NO BUILD conditions, a left-turning driver at Mussel Shoals attempting to go NB on U.S. 101 is expected to experience much higher delay during the PM peak compared to the AM peak period. Under BUILD conditions, the additional travel time incurred traveling to Seacliff to reenter the NB U.S. 101 would be less than the time spent waiting to turn left under NO BUILD conditions during the PM

peak. This pattern would be reversed at La Conchita, where turning left onto SB U.S. 101 is most difficult during the AM peak hour and the travel time incurred to go to Bates Road to reenter the SB U.S. 101 would be less than the wait time.

No changes in LOS are expected to occur at the PCH or Bates Road ramp intersections because of the additional rerouted vehicles.

While motorists that must reroute as a result of the median closures, would experience an increase in travel time, they would also experience a decrease in travel time over 2015 NO BUILD conditions as a result of the improvements to mainline LOS.

Table 2.1-16 describes the increase/decrease in travel time as a direct result of the median closures. It also considers just the reroute distance due to the closures and not the other components of the project (on the US 101 mainline) used by vehicles entering/exiting Mussel Shoals and La Conchita.

**Table 2.1-16 Travel Time Changes From Median Closures – Reroute only**

Potentially Restricted Movement		Reroute Distance (miles)	AM(PM) Peak Hour Volume	NO BUILD Time/Veh (min)		BUILD Time/Veh (min)		Change in Travel Time Time/Veh (min)	
				AM	PM	AM	PM	AM	PM
Mussel Shoals	EB Left	3.1	11(9)	1	16	3	4	+2	-12
	NB Left	5.4	6(5)	-	1	5	5	+5	+4
La Conchita	WB Left	4.3	7(6)	6	1	5	4	-1	+3
	SB Left	4.3	9(27)	1	-	4	4	+3	+4
Notes: Reroute speeds: LOS A, B & C = 65 mph, LOS D = 50 mph & LOS E, F = 35 mph Travel time rounded to the nearest minute									

Source Fehr and Peers Traffic Analysis Report July 2008

Table 2.1.17 on the next page, quantifies the increase/decrease in travel time experienced by the drivers with the entire proposed project. This travel time takes into account increased travel speeds on the mainline because of improvements in LOS as a result of the increased mainline capacity.

**Table 2.1-17 Travel Time Changes From Median Closures – Build**



Potentially Restricted Movement		NO BUILD Time/Veh (min)		BUILD Time/Veh (min)		Change Time/Veh (min)	
		AM	PM	AM	PM	AM	PM
Mussel Shoals	Eastbound Left	5	20	7	8	+2	-12
	Northbound Left	2	3	7	7	+5	+4
La Conchita	Westbound Left	9	4	7	7	-2	+3
	Southbound Left	5	4	8	8	+3	+4
Notes: Reroute speeds: LOS A, B & C = 65 mph, LOS D = 50 mph & LOS E, F = 35 mph Travel time rounded to the nearest minute							

Source Fehr and Peers Traffic Analysis Report July 2008

While median closures impact the ability to make U-turns at Tank Farm, as allowed under existing conditions, it is not possible to quantify "reroute delay" due to the nature of movement. Vehicles making U-turns at this location may do so for a number of reasons, and assumptions regarding the intent, origin, or destination would be speculative. Therefore, no reroute delay is reported for drivers impacted by the median closure at Tank Farms. Additionally, 2015 NO BUILD intersection peak hour volumes in Appendix B illustrates that the number of vehicles projected for this maneuver in 2015 is relatively small, and the impact to these trips is negligible compared to the overall benefit of the project.

**Table 2.1-18**  
**Year 2035 travel Time Changes with & without median closures (Reroute)**

Potentially Restricted Movement		Detour Distance (miles)	NO BUILD Time/Veh (min)		BUILD Time/Veh (min)		Change in Travel Time Time/Veh (min)	
			AM	PM	AM	PM	AM	PM
Mussel Shoals	Eastbound Left	3.1	2	80	4	5	+2	-75
	Northbound Left	5.4	-	9	7	5	+7	-4
La Conchita	Westbound Left	4.3	36	8	7	5	-29	-3
	Southbound Left	4.3	5	1	5	4	0	+3
Notes: Reroute speeds: LOS A, B & C = 65 mph, LOS D = 50 mph & LOS E, F = 35 mph Travel time rounded to the nearest minute								

Fehr and Peers Traffic Analysis Report July 2008

Table 2.1-18 summarizes the additional travel time experienced by drivers who reroute because of median closures compared to the delay they would incur under 2035 No Build conditions. Because of the heavy peak direction flows on U.S. 101, the ability to turn left out of La Conchita and Mussel Shoals depends on the time of day. Under No build conditions, a left-turning driver at Mussel Shoals attempting to go northbound on U.S. 101 is expected to experience much higher delay during the PM peak compared to the AM peak period. Under Build conditions, the additional travel time incurred during the

reroute would be less than the time spent waiting to turn left under No Build conditions during the PM peak. This pattern would be reversed at La Conchita, where turning left onto southbound U.S. 101 is most difficult during the AM peak hour and the reroute delay would be less than the wait time.

The results in Table 2.1-18 indicate that in 2035, the BUILD alternative has a greater benefit for vehicles than in 2015, as conditions on the mainline worsen over time. The locations that experience a decrease/no change in travel time as a result of the BUILD alternative are the following:

- Mussel Shoals eastbound and northbound left – PM Peak hour
- La Conchita westbound and southbound left – AM Peak Hour
- La Conchita westbound left – AM Peak Hour

While median closures impact the ability to make U-turns at Tank Farm, as allowed under existing conditions, it is not possible to quantify "Reroute delay" due to the nature of movement. Vehicles making U-turns at this location may do so for a number of reasons, and assumptions regarding the intent, origin, or destination would be speculative. Therefore, no detour delay is reported for drivers impacted by the median closure at Tank Farms. Additionally, Appendix B illustrates that the number of vehicles projected for this maneuver in 2035 is relatively small, and the impact to these trips is negligible compared to the overall benefit of the project.

**Table 2.1-19**  
**Year 2035 travel Time Changes with & without median closures (BUILD)**

Potentially Restricted Movement		NO BUILD Time/Veh (min)		BUILD Time/Veh (min)		Change in Travel Time Time/Veh (min)	
		AM	PM	AM	PM	AM	PM
Mussel Shoals	Eastbound Left	9	84	9	9	0	-75
	Northbound Left	3	10	8	7	+5	-3
La Conchita	Westbound Left	40	10	10	7	-30	-3
	Southbound Left	11	5	10	8	-1	+3
Notes: Reroute speeds: LOS A, B & C = 65mph, LOS D = 50 mph & LOS E, F = 35mph Travel time rounded to the nearest minute							

*Fehr and Peers Traffic Analysis Report July 2008*

Table 2.1-19 considers the full extent of the BUILD alternative and the effect that this has on vehicle travel time to/from Mussel Shoals and La Conchita. As shown in the table, the benefits to vehicular travel are greater when considering the BUILD alternative as opposed to only the reroute distance. This travel time takes into account increased travel

speeds on the mainline because of improvements in LOS as a result of the increased mainline capacity.

- Mussel Shoals northbound left – AM Peak Hour
- La Conchita southbound left – PM Peak Hour

All other movements benefit from the median closures.

Some of the NO BUILD numbers presented in Tables 2.1-18 and 2.1-19 are large as they represent delay due to the pure projected demand. It should be noted that with the NO BUILD, movements such as the eastbound left from Mussel Shoals (through the median opening) would be unlikely to occur in 2035 because of the delay incurred. Drivers would most likely reroute in the same way as the BUILD alternative would cause them to do.

### **TRAFFIC IMPACTS**

#### **NO BUILD Alternative**

Under the NO BUILD alternative, existing conditions would remain and no impacts to access, circulation, or parking would occur. However, existing congestion along U.S. 101 would not be alleviated, projected growth in the area would not be accommodated, and safety would not be improved along the roadway with implementation of the NO BUILD alternative.

#### **BUILD Alternatives**

The proposed project would not eliminate or restrict automobile or pedestrian access to stores, public services, schools, or other facilities within the study area. The proposed project is designed to alleviate congestion along U.S. 101 through the inclusion of additional HOV lanes, and would not increase or decrease traffic on local streets.

As outlined above, no temporary or long-term impacts to emergency services are anticipated as a result of the proposed project. While the median crossings would be closed at both Mussel Shoals, La Conchita and Tank Farm, emergency gate access would be provided. All other access routes used by emergency vehicles to communities within the study area would not be affected by the proposed project. Additionally, reduction of congestion and improvements to travel times along U.S. 101 would likely improve emergency access and response times within the region and is considered to represent an incrementally positive impact of the proposed project.

In summary, compared to the NO BUILD Alternative, BUILD Alternatives would have an overall beneficial impact on traffic operations for this critical arterial to function as a

major highway and for the regional system. The BUILD Alternatives would substantially improve the LOS and reduce congestion in the AM and PM peak periods. In addition to the U.S. 101, the LOS would be improved at key intersections and ramps at Mussel Shoals, Santa Barbara Ave. in La Conchita, and Tank Farm in the AM and PM peak periods with BUILD Alternative, compared to the NO BUILD Alternative. The BUILD Alternatives would also reduce traffic weaving on the mainline. Closing the median openings under the BUILD Alternatives would confer the benefit of inhibiting drivers from making unsafe maneuvers resulting from frustration with long wait times. Such maneuvers have the potential to disrupt the flow of traffic on the mainline or cause accidents.

### ***Construction/Temporary Impacts***

Motorists traveling within the project area would experience some inconvenience from traffic obstruction. Since there would be no closures of Mussel Shoals access, La Conchita access, Tank Farm, or any of the other ramps along the corridor, there would be no obstruction of access to the communities of Mussel Shoals, La Conchita residents, employees and patrons. However, residents, business owners, and school attendees in this immediate vicinity would experience temporary traffic congestion at times due to lane closures along the highway.

### ***BIKEWAY IMPACTS***

#### ***NO BUILD Alternative***

Under the NO BUILD alternative, the existing bikeway would not change and no impacts would occur.

#### ***BUILD Alternatives***

The BUILD Alternative would improve the bikeway in the NB direction with a separated 8-foot 2 directional Class I bikeway from just north of Mussel Shoals to the Bates Road off-ramp.

In the community of La Conchita there are two design variations, north or south of Santa Barbara Avenue. The proposed bikeway in these options would intersect with the PUC. The North Option has design challenges for cyclists. Cyclists would prefer to ride directly across Santa Barbara Avenue to connect onto the proposed bikeway. Due to right-of-way constraints and the Public Utility Commission requirement for a ten foot buffer from the railroad right of way to the edge of the a proposed cross walk/bicycle crossing, this is not feasible. Consequently, cyclists would have to turn down Santa Barbara Avenue, cross the railroad tracks, U-turn up Santa Barbara Avenue crossing the railroad tracks again to connect onto the proposed bikeway. Although this option poses

problems for cyclists, residents of La Conchita prefer this option to maintain vigilance of the PUC. Figure 2.1-9 illustrates the North Option.



**Figure 2.1-9 North Option Bikeway**

Figure 2.1-10 illustrates the South Option.



**Figure 2.1-10 South Option Bikeway**

The South Option would not require cyclists to cross the railroad tracks to continue on the proposed bikeway. However, cyclists would need to yield or stop for vehicle traffic

on Santa Barbara Avenue and would have to cross over the intersection to the proposed bikeway. The proposed bikeway and PUC would have safety features designed to prevent accidents between cyclists and pedestrians. For example, the entryway of the PUC would be designed to allow for greater sight distance for both users. Appropriate signage would be used to alert cyclists and pedestrians to avoid conflicts.

The creation of a separated bikeway poses maintenance issues for the Department's large street sweepers which cannot be used to clean the proposed bikeway. In addition, lane closures would be required for maintenance crews to access the area creating yet another safety issue. Although the barrier would keep cyclists safe from approaching vehicles, infrequent bikeway maintenance would also be unsafe for cyclists. A mechanical sweeper that fits inside the bikeway would clean it safely and routinely without lane closures. The proposed design would either keep the existing SB bikeway or create a wider outside shoulder that would allow cyclists to travel SB from Bates Road Interchange to the southern project limits. Figure 2.1-11 illustrates the proposed Option A and Option B bikeway cross sections.

# VEN/SB US 101 HOV PROJECT Proposed Bike Way Cross Section

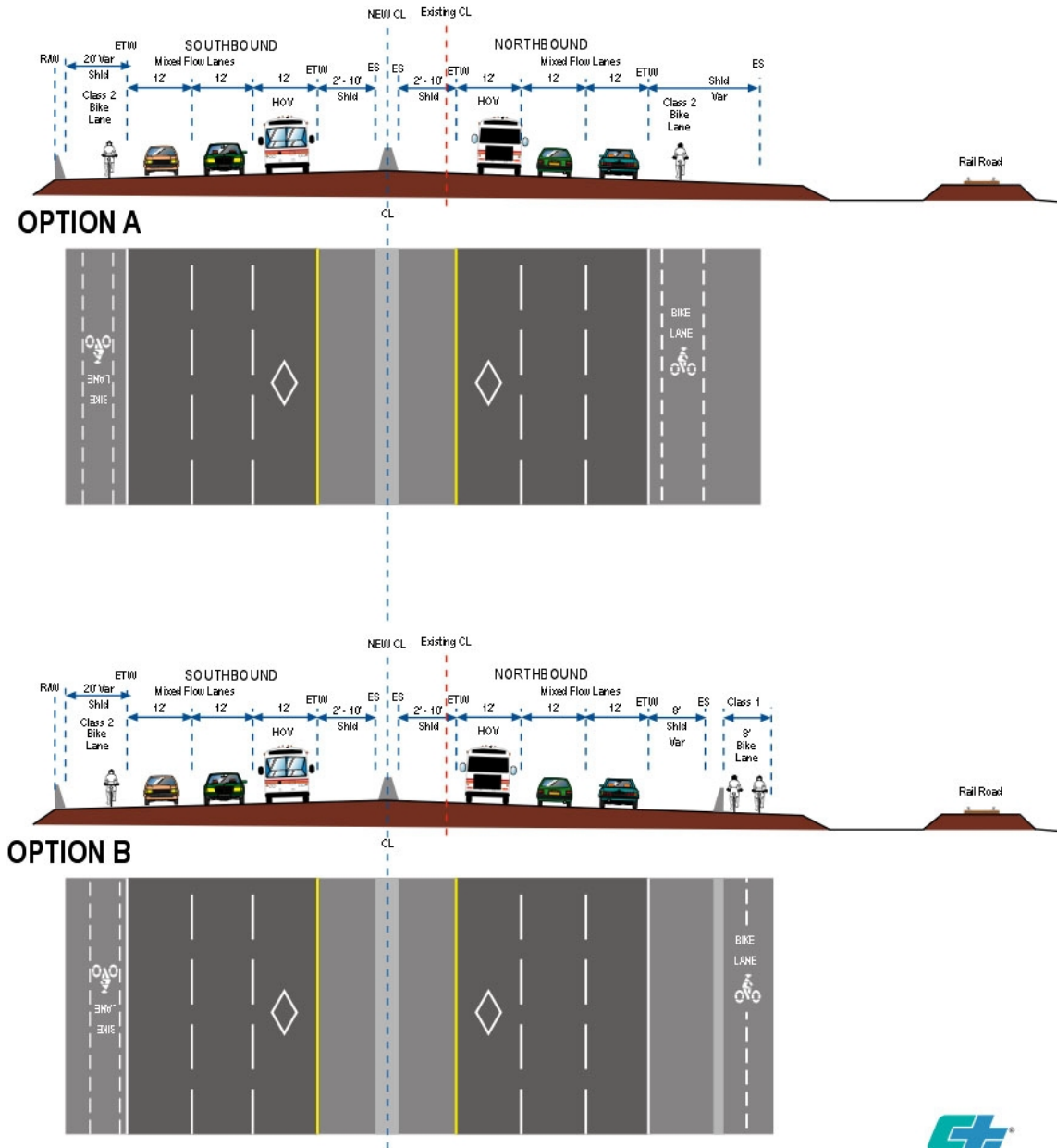


Figure 2.1-11 Proposed Bikeway

## Construction/Temporary Impacts

For BUILD Alternatives, bikeways would be temporarily obstructed. In areas where cyclists are permitted on the roadway, it would be necessary to modify and supplement freeway regulatory signs, particularly those located at U.S.101 ramp entrances and exits.



**PEDESTRIAN FACILITIES IMPACTS**

Under either the NO BUILD or BUILD alternative, the PUC would be constructed in the community of La Conchita. The PUC has already undergone environmental review (EA 196400) and was approved in 2002. Under the BUILD Alternative, construction of the PUC was expected to take place concurrently with the proposed project, however, it is not considered an actual component of the proposed project since environmental review has already been undertaken and approved. Therefore, the PUC would be constructed and is independent of the NO BUILD and BUILD Alternatives.

**PARKING IMPACTS****NO BUILD Alternative**

Under the NO BUILD Alternative, existing emergency shoulder and Cliff House Inn parking spaces would not change and no impacts would occur.

**MINIMUM BUILD Alternative**

Under MINIMUM BUILD Alternative existing freeway emergency parking and Old Pacific Coast Highway parking spaces would not change and no impacts would occur.

**FULL BUILD Alternative**

The FULL BUILD Alternative would result in an estimated permanent loss of approximately half of the parking on Old Pacific Coast Highway. Parking for the Cliff House Inn and Shoals Restaurant in Mussel Shoals is currently provided in front of the facility. An approximate total of 33 parking spaces are located on Old Pacific Coast Highway, a public street. The Cliff House Inn has more than half of its parking lot located in front of the hotel for its patrons. The reduction in adjacent on-street parking spaces is not anticipated to appreciably impact the business operation because adequate on-street parking along Old Pacific Coast Highway would remain available. The mitigation measures for the loss of on-street public parking that is owned by Ventura County are not warranted. Existing emergency freeway parking would not be impacted.

**PUBLIC TRANSPORTATION****NO BUILD Alternative**

Under the “NO BUILD” alternative, existing conditions would remain and no impacts to public transportation would occur. However, existing congestion along U.S. 101 would not be addressed, projected growth in the area would not be accommodated, and safety would not be improved along the roadway with implementation of the “NO BUILD” alternative.

### ***BUILD Alternatives***

The BUILD Alternatives would not affect existing transit services within the region. Should temporary transit impacts during construction activities be deemed unavoidable, coordination with respective transit agencies would occur in advance to limit such impacts. No regional or community-level impacts are anticipated.

### **Avoidance, Minimization and/or Mitigation Measures**

#### **Construction Transportation Management Plan**

A traffic management plan would be developed for this project. Construction is expected to begin in 2011 and end in 2015. The project involves the construction of an HOV lane NB and SB on the VEN/SB U.S. 101.

The following measures are recommended to address potential traffic impacts and facilitate traffic flows during project construction:

- *Temporary Traffic Controls* – Temporary traffic controls, signing, barriers, and flag men should be employed as necessary and appropriate for the efficient movement of traffic (in accordance with standard traffic engineering practices) to facilitate construction of the project improvements while maintaining traffic flows and minimizing disruption to traffic.
- *Street, Ramp Closures and Bikeways (General)* – Construction activities should be staged in such a manner to minimize the need for street, ramp and/or bikeway closures. To the extent possible, such closures (when required) should be made off-peak and/or overnight. In advance of and during closure periods, appropriate temporary signage (in accordance with the Department's guidelines) should be used to warn motorists and cyclists of the closure and direct them to alternative routes. Details will be developed as needed during lane closures.

Adequate public notice and posted announcements would be required to alert motorists of different construction stages and lane closures. During the early and final stages of construction, the placement and removal of concrete barriers may cause traffic delays. The actual number of stages needed and details for the TMP would be developed during final design of the project. Existing lanes would be kept open to traffic during construction and efforts would be made to keep at least two lanes open during peak hours.

**Bikeway**

- Purchase compact suction street sweeper to reduce hazards for the Department's maintenance crews, cyclists and avoid lane closures for routine maintenance.
- Drainage grates, curbs, and other items hazardous to cyclists would not be placed within the shared shoulder.
- Installation of bicycle signs designating the path (R81), (W11-1), (S17 (CA) W11-1) and appropriate advisory signs to alert motorists of the potential for cyclists to travel along the roadway, especially if cyclists are expected to cross exiting/entering ramp traffic.
- Design consideration should be given to items that would affect efficient bicycle travel and safety, such as expansion joints and bridge railing heights.

During construction of either BUILD Alternative, measures should be taken to avoid impacts to cyclists. Space should be made available for use during construction and construction time should be limited to minimize potential route closures.

**Parking**

The property owner would be compensated for any loss of private parking.

**Signage**

Appropriate signage regarding the new route to access the communities of La Conchita and Mussel Shoals would be provided.

**2.1.11 Visual/Aesthetics****Regulatory Setting**

The National Environmental Policy Act of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* and culturally pleasing surroundings [42 United States Code 4331(b)(2)]. To further emphasize this point, the Federal Highway Administration in its implementation of the National Environmental Policy Act [23 United States Code 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, the California Environmental Quality Act establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of *aesthetic*, natural, scenic, and historic environmental qualities.” [California Public Resources Code Section 21001(b)].

## **Affected Environment**

This segment of U.S. 101 within the project limits is a major north-south transportation corridor, it is located adjacent to the Pacific Ocean. It travels through the communities of Mussel Shoals, La Conchita, and Rincon Point in Ventura County before entering Santa Barbara County at the Bates Road Interchange and continues on through the City of Carpinteria. The U.S. 101 through Ventura and Santa Barbara County is considered eligible for state scenic highway designation<sup>3</sup>.

The natural visual resources within the project segment of U.S. 101 consist of the Pacific Ocean, coastal bluffs, hillsides, relatively varied topography, exposed geological formations, and mostly ruderal and landscaping vegetation. High quality views of resources are available from public locations along U.S. 101, nearby beaches, and communities.

Primary views in the region include dramatic views of coastal bluffs and hillsides to the northeast of U.S. 101 and Pacific Ocean views to the southwest of U.S. 101. Throughout the stretch of U.S. 101 within the proposed project limits, there are a few residential communities located on both sides of the highway including Mussel Shoals, La Conchita, and Rincon Point, which are small residential enclaves along the highway and the City of Carpinteria. Other developments along the coast include public campgrounds/open space uses, oil and gas support facilities, and some commercial, industrial, and agricultural uses in Carpinteria. The overall character of the region is relatively rural and agricultural.

## **Methodology**

To provide a clear description of the existing visual setting and to define anticipated impacts, the project area was divided into two landscape units. A landscape unit is a portion of the regional landscape, and can be thought of as an outdoor room that exhibits a distinct visual character. A landscape unit will often correspond to a place or district that is commonly known among local viewers.

Landscape units are areas of distinct, but not necessarily homogenous, visual character that offer similar kinds of views toward the proposed project and/or within which there would likely be similar concerns about landscape issues. These landscape units provide the framework for analyzing the impacts of the alternatives and developing appropriate mitigation measures.

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<sup>3</sup> The status of a scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a Scenic Highway.

The primary landscape units and associated landscape types for the proposed project are:

- U.S. 101 – Northern Portion Landscape Unit primarily Santa Barbara County
- U.S. 101 – Southern Portion Landscape Unit primarily Ventura County

**Identify Visual Character** – Visual character is descriptive and non-evaluative, which means it is based on defined attributes that are neither good nor bad in and of themselves. A change in visual character cannot be described as having good or bad attributes until it is compared with the viewer response to that change. If there is public preference for the established visual character of a regional landscape and resistance to a project that would contrast that character, then changes in the visual character can be evaluated.

**Assess Visual Quality** – Visual quality is evaluated by identifying the vividness, intactness, and unity present in the viewshed. The FHWA states that this method should correlate with public judgments of visual quality well enough to predict those judgments. This approach is particularly useful in highway planning because it does not presume that a highway project is necessarily an eyesore. This approach to evaluating visual quality can also help identify specific methods for mitigating each adverse impact that may occur as a result of a project. The three criteria for evaluating visual quality can be defined as follows:

- **Vividness** is the visual power or ‘memorability’ of landscape components as they combine in distinctive visual patterns.
- **Intactness** is the visual integrity of the natural and man-built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.
- **Unity** is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual man-made components in the landscape.

### ***Methods of Predicting Viewer Response***

Viewer response is composed of two elements: viewer sensitivity and viewer exposure. These elements combine to form a method of predicting how the public might react to visual changes brought about by a highway project.

**Viewer sensitivity** is defined both as the viewers’ concern for scenic quality and the viewers’ response to change in the visual resources that make up the view. Local values

and goals may confer visual significance on landscape components and areas that would otherwise appear unexceptional in a visual resource analysis. Even when the existing appearance of a project site is uninspiring, a community may still object to projects that fall short of its visual goals. Analysts can learn about these special resources and community aspirations for visual quality through citizen participation procedures, as well as from local publications and planning documents.

**Viewer exposure** is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, duration of their view, speed at which the viewer moves, and position of the viewer. High viewer exposure heightens the importance of early consideration of design, art, and architecture and their roles in managing the visual resource impacts of a project.

### ***Existing Visual Resources and Viewer Response***

A description of each landscape unit is provided below. To support the descriptions within each landscape area, one or more simulation viewpoints were selected to capture views typical of those in the viewing area. Typical viewpoints are important because they provide a basis for evaluating the proposed project's visual impacts of greatest concern. In selecting these viewpoints, emphasis was placed on views from publicly accessible locations by the largest numbers of sensitive viewers.

A viewshed is a subset of a landscape unit and is comprised of all the surface areas visible from an observer's viewpoint. The limits of a viewshed are defined as the visual limits of the views located from the proposed project. The viewshed also includes the locations of viewers likely to be affected by visual changes brought about by project features.

Potential viewsheds extend out into the surrounding area. But from many areas in the flat urban landscape, views toward the proposed project and structures are substantially screened by intervening structures and, in some cases, vegetation. The viewsheds for this project include locations within the two landscape units where viewers are likely to be affected by visual changes brought about by the project features. For the purposes of this analysis, viewsheds are the areas defined by the communities within the landscape units.

### ***U.S. 101 Northern Portion Landscape Unit***

This landscape unit encompasses the Santa Barbara County portion of the project and begins near the Casitas Pass Road off-ramp, and extends to the Bates Road off-ramp, a transition area where the coastal rolling hillsides to the northeast become steeper. Most views in this landscape unit consist of the Pacific Ocean in the foreground, rolling hillsides (south of roadway), roadway in the middleground, rolling hillsides (north of

roadway) and further north, the Santa Ynez Mountains in the background. On both sides of the roadway, there are commercial, industrial, agricultural, and residential developments located on the rolling hillsides.

The overall character of this landscape unit can be characterized as more urban than the southern landscape unit due to greater development along the highway, particularly in the City of Carpinteria. However, existing development does not encroach on the existing natural viewsheds of the landscape unit. The vegetation along the highway obscures the buildings and structures closest to the highway. Because of the urban development and varied topography of this landscape unit, it can be characterized as lacking in continuity, but having great diversity. Finally, the roadway within this landscape unit is further away from the Pacific Ocean and offers more distant views of natural resources.

#### *U.S. 101 Southern Portion Landscape Unit*

This landscape unit encompasses Ventura County and begins near the Bates Road Interchange and closely follows the Pacific Ocean coastline until the terminus west of the Mobil Pier Undercrossing. Most views in this landscape unit consist of Pacific Ocean views in the foreground, beaches and roadway in the middleground, and views of coastal bluffs in the background. Much of the bluffs contain largely undeveloped coastal scrub and ranch grasslands, with some agricultural uses. To the southwest of the roadway is the Pacific Ocean with some open space and recreational areas located off the highway between the ocean and the roadway. Residential communities visible along the highway include Mussel Shoals, La Conchita, and Rincon Point. Views beyond the coastal bluffs to the northeast are not visible to viewers on the road or from the residential communities.

The overall character of this landscape unit can be characterized as rural and relatively undeveloped, with limited residential communities. The natural setting presents open and dramatic views of the coastal bluffs and the ocean that continue throughout the unit. Drivers on the road are able to view the surrounding natural resources closely, particularly the coastal cliffs and the ocean since they border the roadway. Additionally, because the highway follows the coastline so closely, drivers may have the sense of traveling along the edge of the ocean.

#### *Carpinteria*

The City of Carpinteria is located in the southeastern corner of Santa Barbara County. The portion of Carpinteria adjacent to the proposed project extends from the eastern city limits to the Casitas Pass Road off-ramp and is more developed than the remainder of the proposed project area.



There is a wide range of land uses on both sides of U.S. 101 including residential, industrial, commercial, agricultural uses, as well as open space and views vary depending on the location. In general, north of U.S. 101 and east and west of Bailard Avenue, a number of residences have limited views of the Pacific Ocean and coastal bluffs, and views from the roadway include limited ocean views, rolling hills, and the Santa Ynez Mountains in the distance. Along most of U.S. 101 within the southern area of Carpinteria, views of U.S. 101 are partially or fully obstructed by mature landscaping. Exceptions include residents north and south of Bailard Avenue, the Rancho Granada Mobile Home Park, and the Tee Time driving range along Carpinteria Avenue.

#### *Rincon Point*

Rincon Point is located next to the Pacific Ocean and is a small private beach community located near the U.S. 101 and Bates Road Interchange. The community consists of a small number of larger single-family residences with the majority facing the Pacific Ocean. To the northeast of the community, mature vegetation and trees impede views of U.S. 101. Views consist of unobstructed and partial ocean views and views of mature vegetation, as well as longer views of the coastal bluffs and distant and limited views of U.S. 101.

#### *La Conchita*

The community of La Conchita is located in the western portion of Ventura County along U.S. 101, southeast of the Santa Barbara County line, approximately five miles southeast of the City of Carpinteria. La Conchita is situated between a steep, unstable hillside on the northeast side of U.S. 101, at the base of Rincon Mountain. The small community consists of mostly single-family residences, and a gas station/general store with a population of just over 300 people. A number of residences have unobstructed views of the Pacific Ocean across the Ventura County Railroad and U.S. 101. To the northwest, the 2,162-foot tall Rincon Mountain rises sharply and residents can only view the hillside and nothing beyond Rincon Mountain.

#### *Mussel Shoals*

The community of Mussel Shoals is located immediately adjacent to the Pacific Ocean and is southwest of U.S. 101 off Old Pacific Coast Highway. The small community is mostly residential but does have some commercial uses (Cliff House Inn). Other features at Mussel Shoals include the Mussel Shoals Oil Piers and man-made Rincon Island, which is approximately a half-mile offshore. The residents and visitors of Mussel Shoals have relatively unobstructed views of the Pacific Ocean to the southwest and hillsides (on the northeast side of the U.S. 101). The residences and hotel are all oriented towards the

ocean and therefore residents and visitors do not typically face the coastal hillsides to the northeast except when they exit the community.

### ***Existing Visual Quality***

#### ***U.S. 101 Northern Portion Landscape Unit***

The visual quality of this landscape unit can be described as having moderate-low vividness and moderate intactness. The lack of the high coastal cliff views within the landscape unit decreases the vividness of the visual quality. However, the intactness of the unit remains moderate, as along this stretch of the project segment the man-made elements (residential communities and highway) do not encroach on the existing natural setting. Finally, the landscape unit also shows high unity in its visual quality since the man-made elements (highway and residential communities) within this unit do not disrupt the continuity of the existing natural lines and landforms.

#### ***U.S. 101 Southern Portion Landscape Unit***

The visual quality of this landscape unit can be described as having moderate to high vividness and moderate intactness with the dramatic backdrop of the coastal cliffs and the unobtrusive nature of communities nestled in coastal plateaus and U.S. 101 built along the coastline without encroaching on the visual character of the landscape unit. Additionally, the landscape unit shows high unity in its visual quality since the man-made elements (highway and residential communities) within this unit do not disrupt the continuity of the existing natural lines and landforms.

### ***Existing Viewer Sensitivity***

The proposed project is located along the central coast of California. This portion of the California coastline is known for its natural beauty and relatively undisturbed coastal resources. The potential viewers of the project area include residents of communities along U.S. 101, visitors/tourists of local communities, employees, and drivers and cyclists on U.S. 101 through the project segment. Viewer sensitivity for residents and tourists/visitors to the potential changes to the visual character and quality of the project segment would be high due to the existing visual resources. The residents and visitors/tourists of the area value the existing visual setting and would likely be very sensitive to any visual disturbance. Drivers and cyclists on the other hand would probably have lower viewer sensitivity to changes to the existing visual setting. While cyclists would also need to focus on the road, they are more likely to be cycling for recreational reasons rather than for commuting reasons. Therefore, viewer sensitivity for cyclists would be higher than drivers/commuters. Overall, residential viewers have higher viewer sensitivity than cyclists and drivers/commuters.

The communities located along the project segment have developed general, community, and local coastal plans that contain goals, policies, and implementation measures. Because of the high level of public scrutiny that development policies and projects receive within the study area, the policies contained in the general, community, and local coastal plans for the study area reflect residents' values and their expectations regarding the level of protection local governments will provide for their visual environment.

***Existing Viewer Groups, Viewer Exposure, and Viewer Awareness***

Drivers along U.S. 101 within the project segment would be able to view the coastal setting on both sides of the highway through lateral vision. However, due to the high speed at which cars travel on the highway, the drivers' focus is usually along the line of travel rather than the peripheral views. Since cars may be traveling at high speeds on U.S. 101, drivers and passengers along the highway would have moderate exposure and awareness of the project segment. Drivers' concerns about the project impacts on their views would be moderate in the U.S. 101 Northern Portion Landscape Unit and moderate to moderately high in the U.S. 101 Southern Portion Landscape Unit because of differences in visual character and quality.

Cyclists along U.S. 101 within the project segment would also be able to view the coastal setting on both sides of the highway through lateral vision. Cyclists would have moderate to moderately high exposure and awareness of the project segment and moderate to moderately high concerns for the impacts on their views resulting from the project.

***Community Residents***

***Carpinteria***

A portion of the City of Carpinteria is located within the project segment. The residential developments are located next to the NB side of the highway at a higher elevation than the SB side of the highway. The residents have background views of the Santa Ynez Mountains to the north; middleground views of the highway; vegetation along the roadway, hills, and other residential development; and foreground partial views of the Pacific Ocean. The surrounding views of the communities within Carpinteria are much more diversified. Residents of Carpinteria would also value the existing visual resources. The residents of Carpinteria would have high exposure and awareness of the project viewsheds, as well as high concern for impacts on their views resulting from the project. The city has limited views of U.S. 101.

### **Rincon Point**

Rincon Point consists of single-family homes facing the southwest towards the Pacific Ocean. The backdrop of the dramatic coastal bluffs to the northeast of U.S. 101 can be viewed while exiting the community or when residents face northeast from their location. Because the community of Rincon Point is located in a relatively isolated point along U.S. 101, it is presumed that its residents value the existing visual resources greatly. The residents would have high exposure and awareness of the project viewsheds, as well as high concern for the impacts on their views resulting from the project. The community has limited views of U.S. 101.

### **La Conchita**

The single-family residences in the community of La Conchita are primarily oriented towards the Pacific Ocean. Because the community of La Conchita is located in a relatively isolated point along U.S. 101, it is presumed that its residents value the existing visual resources highly. The residents of La Conchita would have high exposure and awareness of the project viewsheds, as well as high concern for the impacts on their views resulting from the project. The community has direct views of U.S. 101.

### **Mussel Shoals**

The single-family homes and Cliff House Inn in Mussel Shoals are primarily designed to allow residents and visitors to enjoy the views of the Pacific Ocean, facing mainly southwest. The backdrop of the coastal bluffs to the northeast of U.S. 101 can be viewed while exiting the community or when visitors/residents face northeast from their location. It is assumed that both residents and visitors place considerable value on the existing visual resources and views within the community. The residents of and visitors to Mussel Shoals have a relatively high exposure to and awareness of project viewsheds, as well as potential impacts resulting from the proposed project. The community has partial views of the U.S. 101.

### ***Industrial and Commercial Development – Employees***

The employees of industrial and commercial development off U.S. 101 on both sides of the roadway have views of the highway, hillsides, and Pacific Ocean. Employees in Carpinteria may not value the existing visual quality as highly as residents in the communities mentioned above; however, employees who work mostly outdoors or whose offices look out over the mountains or ocean beyond would likely place higher value on existing visual resources. Therefore, it is presumed they would have moderate to moderately high exposure and awareness of the project viewsheds, as well as moderately high concern for impacts on their views resulting from the project.

## **Environmental Consequences**

### ***Method of Assessing Project Impacts***

The visual impacts of the project alternatives were determined by assessing the visual resource changes that would occur as a result of the project and predicting viewer response to the changes. Visual simulations were used to illustrate proposed project features. Final design of the proposed features would be determined through consultation with communities in the design phase of the project and would also be subject to feasibility.

Visual resource change is the sum of the change in visual character and change in visual quality. The first step in determining visual resource change is to assess the compatibility of the proposed project with the visual character of the existing landscape. The second step is to compare the visual quality of the existing resources with projected visual quality after the project is constructed.

The viewer response to project changes is the sum of viewer exposure and viewer sensitivity to the project as determined in the preceding section. The resulting level of visual impact is determined by combining the severity of resource change with the degree to which people are likely to oppose the change.

### ***Definition of Visual Impact Levels***

**Low** - Minor adverse change to the existing visual resource, with low viewer response to change in the visual environment. May or may not require mitigation.

**Moderate** - Moderate adverse change to the visual resource with moderate viewer response. Impact can be mitigated within five years using conventional practices.

**Moderately High** - Moderate adverse visual resource change with high viewer response or high adverse visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required would generally take longer than five years to mitigate.

**High** - A high level of adverse change to the resource or a high level of viewer response to visual change such that architectural design and landscape treatment cannot mitigate the impacts. Viewer response level is high. An alternative project design may be required to avoid highly adverse impacts.

### ***Analysis of Key Views***

Because it is not feasible to analyze all the views in which the proposed project would be seen, it is necessary to select a number of key viewpoints that would most clearly display the visual impacts of the project. Key views also represent the primary viewer groups that would potentially be affected by the project. The following locations are depicted as key views:

- U.S. 101 and Bailard Avenue
- Via Real, City of Carpinteria
- U.S. 101 Northbound approaching Bates Road
- U.S. 101 Northbound near Tank Farm
- U.S. 101 Southbound near La Conchita,
- U.S. 101 Southbound approaching Mussel Shoals

There are also associated key views and conceptual project features. For each key view analyzed, only the project features potentially visible from the key views are described and evaluated.



**Figure 2.1-12 Existing NB View at Bailard Ave.**



**Figure 2.1-13 Simulation NB View at Bailard Ave. with HOV Lane**

**U.S. 101 and Bailard Avenue**

At this location, the key view simulations illustrate the changes in the visual environment as a result of the additional High Occupancy Vehicle (HOV) lanes for both directions of U.S. 101, replacement of metal beam guardrail with concrete barrier, and soundwall on the northbound side of the roadway at Bailard Avenue. Figure 2.1-12 depicts the existing northbound view of U.S. 101 from Bailard Avenue. Figure 2.1-13 is a simulation of the same view with the proposed HOV lanes, median landscape, concrete barriers and soundwall with vines.

***Change to Visual Quality/Character***

With the existing visual resources of mountains and ocean further out in the distance at this location, and urban development located along both sides of the roadway, the visual



quality can be described as having moderately-low vividness and moderate intactness and unity. The resulting changes to the visual character would be the appearance of increased pavement and man-made elements on the roadway resulting from the concrete median and additional HOV lanes. The soundwall along the highway would be located on the north side on top of rolling hills and surrounded by dense vegetation.

Overall, the visual quality at this location would decrease to some extent. The existing visual quality of the location is characterized by moderate-low vividness and moderate intactness and unity. The scale and the texture of the soundwall would be compatible with the surrounding landscape of hills and vegetation.

### ***Viewer Response***

While drivers are expected to have low to moderate sensitivity to viewshed changes, their response would likely be moderate.

### ***U.S. 101 and Via Real***

For the residents at this location on the north side of the highway, the soundwalls would partially block views of the roadway, as well as distant views of the Pacific Ocean as seen in Figure 2.1-14 and 2.1-15.

### ***Change to Visual Quality/Character***

Residents who reside in houses closer to the soundwalls would likely have a greater response to the blocked viewshed as a result of the soundwalls. Residents further away from the soundwall would not experience as much of a change to their viewshed as a result of higher elevation.

### ***Viewer Response***

Overall, residential viewer response would range from moderate to moderately high.



**Figure 2.1-14 Existing View Via Real, City of Carpinteria**



**Figure 2.1-15 Simulation Via Real, City of Carpinteria with Soundwall**

**U.S. 101 and Bates Road**

The key view simulation for this location depicts the changes in the visual environment as a result of the proposed changeable message sign (CMS) near the Bates Road Interchange in Ventura County, bikeway improvements, HOV lanes, and concrete barriers. See Figure 2.1-16 and 2.1-17 on the next page.



**Figure 2.1-16 Existing NB View near Bates Rd. Interchange**



**Figure 2.1-17 Simulation NB View near Bates Rd. Interchange with CMS sign**  
***Change to Visual Quality/Character***

The addition of the changeable message sign would obscure portions of the coastal hillsides for drivers traveling northbound. This man-made feature would partially disrupt the natural setting and decrease the intactness of existing visual quality.

### **Viewer Response**

The changeable message sign would be visible to drivers and cyclists traveling northbound on U.S. 101. For the residents of the Rincon area, this sign may be slightly

visible in the distant background views of the coastal hillsides. The residents' response to this project feature would be low as the views of the hillsides are not blocked. For the drivers and the cyclists, the changeable message sign is intentionally placed in the direct line of travel and would inform drivers and cyclists of road conditions, so their response would be short-term and low.



**Figure 2.1-18 Existing View NB near Tank Farm**



**Figure 2.1-19 Simulation NB near Tank Farm with HOV Lane**



**Phillips Petroleum La Conchita Oil & Gas Facility (Tank Farm)**

This key view simulation shows the changes in the visual environment resulting from the replacement of median turn-out with an emergency gate near Phillips Petroleum/Tank Farm, HOV lanes, concrete barriers, and bikeway improvements as shown in Figure 2.1-18. Additional visible features at this location include the HOV lane, concrete barriers and bikeway improvements as shown in Figure 2.1-18.

***Change to Visual Quality/Character***

The visual quality of this landscape unit can be described as having moderate vividness and intactness with the dramatic backdrop of the coastal bluffs and Phillips Petroleum Oil and Gas Facility obscured by dense vegetation along the roadway. A HOV lane, emergency gate that would replace the median opening, concrete barriers, and improvements to the bikeway would be added. These project features would not impede views of the Pacific Ocean or the coastal bluffs; therefore, the existing visual character/quality would not be adversely impacted.

***Viewer Response***

Viewers at this location would include employees at the oil and gas facility, drivers, and cyclists. Viewer awareness and sensitivity for these views range from low to high. However, the proposed project features would not obscure or degrade existing viewsheds; therefore, their response would be low.

**La Conchita**

At La Conchita, existing photos and simulations that demonstrate the changes in the visual environment as a result of the proposed HOV lanes, median closure and emergency gate, concrete barriers, soundwalls, bikeway improvements, and proposed PUC, are shown in Figure 2.1-20 and Figure 2.1-21.

The existing median opening on the U.S. 101 at the community of La Conchita would be closed with a concrete barrier median and an emergency gate. The proposed soundwall between the railroad and Surfside Street would be approximately the length of the community and a minimum of 12-feet high.



**Figure 2.1-20 Existing SB View near La Conchita**



**Figure 2.1-21 Simulation SB View near La Conchita with HOV Lane**

On the next page, Figure 2.1-22 shows the existing view from Surfside and Fillmore Avenue in La Conchita. Figure 2.1-23 shows the same view with proposed simulated soundwall, and Figure 2.1-24 shows the same view with concrete barriers and without the soundwall.



**Figure 2.1-22 Existing View Surfside Ave. and Fillmore St.**



**Figure 2.1-23 Simulation Surfside Ave. and Fillmore St. with Soundwall**



**Figure 2.1-24 Simulation Surfside Ave. and Fillmore St. with Concrete Barrier**



### ***Existing Visual Quality/Character***

The single-family residences in the community of La Conchita are primarily oriented towards the Pacific Ocean. The existing viewsheds consist of foreground views of the Pacific Ocean, middleground views of U.S. 101 and railroad, and views of the tall cliffs behind the community (facing northeast).

The visual quality of this landscape unit can be described as having moderate vividness and intactness with the dramatic backdrop of the coastal cliffs and the unobtrusive nature of communities nestled in coastal plateaus, and U.S. 101 built along the coastline without encroaching on the visual character of the landscape unit.

Additional features at this location include a Class I northbound bikeway and a Pedestrian Undercrossing (PUC) as shown in Figure 2.1-25 through 2.1-30. The PUC was analyzed under an IS/EA and approved in 2002. The PUC will be constructed at the same time as the proposed project and will be evaluated through the cumulative analysis.

### ***Change to Visual Quality/Character***

The implementation of the proposed features at this location would result in additional man-made elements that would be visible to the residents of La Conchita, drivers, and cyclists along U.S. 101. The most prominent project feature would be the soundwall along the community. The proposed concrete barrier median would replace the existing metal beam guardrail. An emergency crash gate would also be constructed to close off the existing median turnout. The proposed PUC would include wall panels, ramps, and signage on both sides of the highway. The soundwall would be visible to all residents of La Conchita and drivers along the highway, blocking views of the roadway and Pacific Ocean for the residents, and views of the community and coastal cliffs for the drivers. The concrete median and emergency crash gate would not entirely obscure views of the coastal cliffs or the Pacific Ocean. Overall, the visual quality of the location would degrade considerably. The proposed project would introduce man-made features that would decrease the overall intactness and vividness of the existing natural setting.



**Figure 2.1-25 Existing View of Santa Barbara Ave. La Conchita**



**Figure 2.1-26 Simulation Santa Barbara Ave. La Conchita North Option Bikeway**



**Figure 2.1-27 Existing View of Santa Barbara Ave. La Conchita**



**Figure 2.1-28 Simulation Santa Barbara Ave. South Option Bikeway**



**Figure 2.1-29 Existing Beachview near La Conchita**



**Figure 2.1-30 Simulation of Beachview near La Conchita with PUC**

### ***Viewer Response***

The proposed sound walls, crash gate, and concrete median would be visible from the residences within La Conchita and to residents and visitors entering and leaving the community, as well as to northbound and southbound road users.

### ***Community***

The residents of La Conchita value the existing visual resources highly, in particular views of the ocean. The residents would have high exposure and awareness of the project viewsheds, as well as high concern for the impacts on their views resulting from the project. The proposed soundwall which extends the length of the community would

substantially obscure views of the Pacific Ocean for the residents. The concrete median and emergency crash gate would only be visible at the exit of the community. La Conchita residents have high visual awareness and exposure to changes to their daily views, the project features at this location would change their ocean views drastically. Therefore, their response to proposed project features would be high.

### *Drivers and Cyclists*

For the drivers and cyclists on U.S. 101 traveling southbound or northbound, the concrete median and emergency crash gate would be part of their peripheral views. The soundwall would obscure the residential community as well as a portion of the coastal cliffs. For drivers and cyclists, their response to proposed project features would be moderately high.

### *Mussel Shoals*

Key view simulations for Mussel Shoals show the changes in the visual environment as a result the proposed HOV lanes, soundwalls, emergency crash gate, concrete barriers and bikeway improvements. Soundwalls are proposed within state right-of-way north and south of the entrance into the community and an emergency crash gate would be installed at the existing median opening, thereby closing off the median turn-out. Figure 2.1-31 and 2.1-32 depict the existing southbound view approaching the entrance to Mussel Shoals.

The existing views from U.S. 101 include dramatic views of the steep coastal bluffs and the roadway, community and Pacific Ocean. The visual quality of the location can be described as dramatic and vivid. Overall, the site is relatively intact as the only existing man-made elements are the roadway and the median.





**Figure 2.1-31 Existing SB Approach to Mussel Shoals**



**Figure 2.1-32 Simulation SB Approach Mussel Shoals with Soundwalls**

### ***Change to Visual Quality/Character***

The proposed project features would result in additional man-made elements to the existing viewshed, thereby decreasing the overall intactness. While the soundwalls and emergency crash gate would not entirely obscure views of the coastal bluffs or the Pacific Ocean, the visual quality of the location would decrease as the man-made additions may distract from views of the natural setting.

### ***Viewer Response***

The proposed gate and soundwalls would be visible to residents, individuals entering and leaving the community, as well as to northbound and southbound highway users. The residents of Mussel Shoals would have high exposure and awareness of the project viewsheds, as well as a high concern for the impacts on their views resulting from the

project. For the residents, the proposed additions would not interfere with their views of the Pacific Ocean, which are highly valued. The soundwall and emergency gate may partially impede the views of the coastal bluffs. However, the residents may not have high sensitivity to changes in the views of the coastal bluffs compared to views of the ocean since their residences are oriented towards the ocean. For the drivers, the installation of the emergency crash gate would partially obscure views of the coastal bluffs for motorists heading south. The soundwalls along the freeway are noticeable for drivers heading southbound or northbound. Motorists traveling may not have a clear view of the Cliff House Inn because of the proposed soundwalls. Overall change in visual character and visual quality is expected to be moderate.

### ***Construction/Temporary Impacts***

Construction impacts associated with the proposed project would result from staging area, warning signage, potential on-site equipment storage, and possible construction at night that may require additional lighting. These construction activities may obscure views from residents, drivers, and cyclists. However, all these changes are temporary and necessary in the interest of safety during construction for workers and drivers. Therefore, due to the temporary nature of the impacts, the loss of views and visual quality during construction is not considered to be adverse.

### **Avoidance, Minimization and/or Mitigation Measures**

The implementation of the mitigation measures listed below would decrease the visual impact resulting from the proposed HOV lanes, concrete barriers and soundwalls. The following project considerations would be incorporated to minimize impacts and ensure compatibility with local policies and the surrounding visual environment:

- The decision on noise abatement measures (such as soundwalls) would be made by the project proponent, considering the results of the reasonableness determination and information collected during the public input process. The opinions of the affected property owners would be considered in reaching a final decision on the recommended noise abatement measures. Noise abatement within the State right-of-way would not be provided if more than 50% of the affected property owners do not want it.
- Retain as much existing vegetation as possible or plant vegetation in the median such as shrubs up to 4 to 5 feet tall as feasible.
- Soundwalls would be planted as feasible with wall vines to soften their appearance and reduce associated visual impact.



- Provide hardscape decorative design on the concrete barrier.
- Visible signage for the Cliff House Inn or installation of a type of soundwall that offers more visibility of the Inn.
- Architectural texture and/or anti-graffiti coating would be used in retaining wall, soundwall, and PUC design and construction to deter graffiti vandalism.

The implementation of the mitigation measures listed above would decrease the visual impact resulting from the proposed HOV lanes, concrete barriers and soundwalls. The resulting visual impact with mitigation measures would be low and would be considered less than adverse.

## **2.1.12 Cultural Resources**

### **Regulatory Setting**

“Cultural resources” as used in this document refers to all historic-period and archaeological resources, regardless of significance. Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act of 1966, as amended, (NHPA) sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the Advisory Council’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA’s responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Pilot Program (23 CFR 773) (July 1, 2007).

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the “use” of land from historic properties. Historical resources are considered under the California Environmental Quality Act (CEQA), as well as California Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet National Register

of Historic Places listing criteria. It further specifically requires the Department to inventory state-owned structures in its right-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the SHPO before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

### **Affected Environment**

A Historic Property Survey Report (HPSR) (completed in May 2008), an Archaeological Extended Phase I report, and an Environmentally Sensitive Area (ESA) Action Plan were completed by the Department's Division of Environmental Planning Cultural Resources Branch in April 2008.

In preparation for cultural studies, the following records were searched:

- National Register of Historic Places 1979-2002 & supplements
- California Register of Historical Resources 1992 & supplements
- California Inventory of Historic Resources 1976
- California Historical Landmarks 1995 and supplements
- California Points of Historical Interest 1992 and supplements
- State Historic Resources Commission 1980 to present, quarterly meeting minutes
- The Department's Historic Highway Bridge Inventory 2003 & supplements
- Archaeological site records: South Central Coastal Information Center; California State University at Fullerton, January 2008.
- Archaeological site records: Central Coast Information Center; University of California, Santa Barbara, January 2008.

A records search covering a half-mile radius surrounding the project area was obtained from the South Central Coastal Information Center (SCCIC) and from the Central Coastal Information Center (CCIC) of the California Historical Resources Information System (CHRIS).

Results: The records search indicated that the study area had been previously surveyed and five cultural resources were previously reported near or within the Area of Potential Effect. The Area of Potential Effect (APE) represents the area within which the proposed project has the potential to affect, either directly or indirectly, any significant

archaeological or historic-period resources. The HPSR identified five prehistoric sites within or immediately adjacent to the project Area of Direct Impact (ADI), all of which had been identified by previous surveys. An Extended Phase I study was conducted at specific site locations to determine site integrity within the project ADI. No intact deposits were identified. For the purposes of the present project, however, all of the site areas adjacent to the ADI are being included within the APE and are being assumed eligible for the National Register. An Environmentally Sensitive Area (ESA) action plan was prepared, which specifies that all five sites will be protected from disturbance by ESA fencing.

#### **CA-VEN-41**

This site is located on a marine terrace directly north of Punta Gorda. It is described (in a 1966 site record) as a scatter of chert flakes and Olivella shell beads. Area of the site was 20' x 50' and no features or burials were observed. Little additional information is given other than the fact that the site was not "worth further investigation." Although the site is near the north side of the APE, there is little likelihood that any intact deposits exist within the project area. Most, if not all, of the site occurs on the north side of the Southern Pacific Railroad right-of-way. Further investigation is not warranted.

#### **CA-VEN-644**

This site is situated on a marine terrace northwest of Punta Gorda. It mainly occurs within the Southern Pacific Railroad right of way and is visible on the southwest side of the tracks. As documented by a 1988 site record supplement, the site primarily consists of marine shell and "slight midden development." No artifacts or features were observed. An additional evaluation of the site suggested that the deposit is not a site and is more likely a natural formation containing natural marine shell and asphalt.

#### **CA-VEN-1110**

This site, recorded in 1993, is likely a remnant of an archaeological deposit that once began on the bluff north of the railroad tracks and encompassed most of the marine terrace south of the tracks. Previous construction in the area likely destroyed most of the site. Currently, the site is exposed high on the sea cliff north of the tracks. A distinct cultural lens is present within the cliff face consisting of bone, shell, fire-affected rock, human bone and shell beads.

#### **CA-SBA-1**

This site is a very large village located at Rincon Point. Ethnohistorically known as the village of Shuku, this site has been investigated numerous times over the past 80 years. Currently the site is covered by residential development. It has also been damaged by

highway and railroad construction. Little of the site is visible on the surface. Past research in the area has identified six locations, two of which are found within the APE. Another location, SBA-1C/D is near the APE, but is situated on a high terrace overlooking the highway. Numerous burials have been removed over the years, and the site contains a wide range of artifactual and ecofactual material including groundstone artifacts, beads, bifaces, marine shell refuse and faunal remains. It is very unlikely that any intact deposits exist within the project APE.

### **CA-SBA-1168**

This site was discovered in 1980 during construction monitoring. The site consists of a thin cultural lens located approximately 18 feet below existing grade. The deposit, containing chipped stone tools and shellfish remains, is covered by imported fill associated with past highway construction. The deposit is visible in the road cut and is largely undisturbed in its buried context.

The Area of Potential Effects (APE) for the project was established in consultation with the The Department's Professionally Qualified Staff (PQS) Principal Investigator - Prehistoric Archaeology, and the VEN/SB 101 HOV Project Manager on April 29, 2008. The APE was established around the proposed project construction easement. The APE represents the worst case scenario and includes all proposed alternatives and construction easements.

Most of the project is situated on a marine cut terrace which lies directly below the southern slope of the Santa Ynez Mountains. The terrace dates from the Middle Miocene and is mainly composed of Monterey shale and unnamed sandstone, mudstone, and breccia (coarse grained rock). Little to no soil development occurs on the terrace. While coastal sage scrub abounds on the slopes above, only grasses and forbs and other ruderal species occur on the terrace adjacent to the highway. Most of the terrace has been disturbed by freeway and residential development.

The project is located in the ethnographic and historic territory inhabited by the Barbareño Chumash of the Hokan language stock. The coastal adaptation of the Chumash included subsistence based on shellfish, fish, a variety of seeds and vegetable products, and hunting of marine mammals and deer. Groups also traveled inland to trade for piñon nuts, acorns and elk. The nearby village of Shuku located near Rincon Creek was centrally tied to this exchange network and likely traded with adjacent villages and the Gabrielino to the south. Modern Chumash place a high value on cultural resources such as archaeological sites, especially historically identified villages, mortuary areas, and isolated burials, shrines and traditional natural resources and features.

The history of Santa Barbara County can be broken down into four periods; Early Explorer Period (1542-1769), Spanish Mission Period (1769-1821), Mexican Ranch Period (1821-1846), and Anglo-American Period (1846- to present). Today, the City of Santa Barbara is home to over 90,000 people. The regional metro area has a population of approximately 400,000. Tourism continues to be a major source of revenue for the area (Hatcher 2004).

### **Environmental Consequences**

On March 12, 2008, The Department's archaeologists conducted an Extended Phase I cultural resources investigation within the proposed project limits located along U.S. 101. The area investigation encompassed the entire extent of the APE for the proposed widening, pedestrian undercrossing, and bikeway improvements. The purpose of the investigation was to determine the presence or absence of subsurface cultural material within the APE and to ascertain the degree of potential disturbance to any identified resources.

The study, entailing the excavation of eight Shovel Test Pits (STPs), effectively determined whether subsurface cultural material was likely to be present within the APE. The test units were excavated within the area of direct impact. However, due to safety constraints, placement of the excavation units was mostly limited to areas adjacent to US-101 (frontage roads, on- or off-ramps, etc). Nevertheless, it is believed that adequate coverage of the APE (and immediate area) was obtained by testing in these areas. Sites CA-VEN- 141 and CA-SBA-1B, although occurring near the project, were not tested due to their considerable distance from the area of direct impact.

From the excavation of the eight STPs it was determined that none of the site locations within the APE contained intact cultural material. In some locations, marine shell remains were found, but these were felt to be from natural or secondary deposition. All areas tested appeared disturbed from previous highway construction. While some site boundaries (as indicated on existing survey and excavation reports) fall within the project APE, it is felt that these areas are devoid of intact cultural material.

Based on the results of the record research and STP excavation, it is highly unlikely that any resources exist within the project APE so there would be no impacts from any of the BUILD alternatives. The APE has been subjected to profound disturbance from previous highway construction. Cut and fill activities associated with this construction have, without a doubt, carried away or totally destroyed any existing deposits. Marine shell remains as seen in some of the STPs either represent natural sediments or secondary

deposits from nearby archaeological sites. All these deposits occur in a disturbed context and none of them qualify as eligible properties under 36 CFR 800.

The Department has determined that this project will have no impact/no adverse impact to state owned archaeological sites, objects, districts or landscapes within the project limits that meet National Register and/or State Historical Landmarks eligibility criteria. As a consequence of this determination, we are providing notice and a summary of our findings to the State Historic Preservation Officer (SHPO) pursuant to PRC §5024(f). A copy is contained in Appendix G.

### **Avoidance, Minimization and/or Mitigation Measures**

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will identify and notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact District 7 Environmental Branch so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

As there are known cultural resources nearby, ESA fencing would be placed along the entire edge of the project (i.e., construction limits) within established areas adjacent to identified site locations (which have been determined eligible for the purposes of this undertaking), and that an archaeological monitor be present during any ground disturbing activities. Should any cultural resources be encountered during construction, all work in the area of the discovery must stop until the on-site monitor can evaluate the nature and significance of the find.

## **2.2 PHYSICAL ENVIRONMENT**

### **2.2.1 Hydrology and Floodplain**

#### **Regulatory Setting**

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. Requirements for compliance are outlined in 23 Code of Federal Regulations 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

### **Affected Environment**

A Location Hydraulics Study and Floodplain Evaluation were completed March 12, 2008. The Rincon runoff is the predominant hydrologic feature in the project area. Mountain runoff is collected through the natural channels and discharged to the ocean via culverts crossing the freeway.

The Federal Emergency Management Agency (FEMA) has identified several types of flood hazard areas in the Flood Insurance Rate Map (FIRM):

- Zone A – Areas in the 100 year flood; base flood elevations and flood hazard factors not determined.
- Zone B – Areas between the limits of the 100 year flood and 500 year flood.
- Zone C – Areas of minimal flooding.

Based on the FIRM, the project has crossed Zone A just south of Mussel Shoals and Zone B from Carpinteria Avenue in La Conchita to Tank Farm.

The drainage area covers about 465 acres of the Rincon Mountain; discharge rate for 100 year storm event ( $Q_{100}$ ) is 1174 cubic feet per second (cfs), runoff was discharged to the ocean via the 10 foot by 6.5 foot reinforced concrete box culvert around Carpinteria Avenue in La Conchita.

Between Carpinteria Avenue in La Conchita to Tank Farm the project crosses Zone B flood zones, areas between the limits of the 100 year flood and 500 year flood. Since



flooding at these areas are expected only to occur under events exceeding the 100 year base flood, no further evaluation is warranted by Section 804 of the Highway Design Manual. Floodplain Maps:

- FIRM, Ventura County, California, Community Parcel No. 060413-0685BFIRM,
- Santa Barbara County, California, Community Panel No. 060331-1440F
- USGS Quadrangle maps, California

### **Environmental Consequences**

For BUILD alternatives the project proposes no new alignments that encroach into the floodplain. The roadway widening is proposed within the median area and inside and outside shoulder area, so there would be no substantial rising of the elevation of the (100 year) base flood and no floodplain impact caused by this project to the surrounding areas. The floodway is contained in a channel according to the Flood Insurance Rate Map. The proposed project impacts would be considered less than significant.

Backwater damages would not affect residents, buildings, crops, and natural beneficial floodplain values. Floodplain values or damages due to a 100 year storm event and as a result of the project would be minimal. There would be no longitudinal or significant encroachment, or any support of incompatible floodplain development. Based upon the Location Hydraulic Study, it is determined that this is a low risk project and the impacts would be less than significant.

### **Avoidance, Minimization and/or Mitigation Measures**

Because none of the proposed BUILD alternatives would result in significant impacts to hydrology or floodplains, no avoidance, minimization, and/or mitigation measures are required

## **2.2.2 Water Quality and Storm-water Runoff**

### **Regulatory Setting**

Section 401 of the Clean Water Act requires water quality certification from the State Water Resources Control Board or from a Regional Water Quality Control Board when the project requires a Clean Water Act Section 404 permit to dredge or fill within a water of the United States.

Along with Section 401 of the Clean Water Act, Section 402 of the Clean Water Act establishes the National Pollutant Discharge Elimination System permit for the discharge of any pollutant into waters of the United States. The U.S. Environmental Protection

Agency has delegated administration of the National Pollutant Discharge Elimination System program to the State Water Resources Control Board and nine Regional Water Quality Control Boards. The State Water Resources Control Board and Regional Water Quality Control Boards also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The State Water Resources Control Board has developed and issued a statewide National Pollutant Discharge Elimination System permit to regulate storm water discharges from all of the Department's activities on its highways and facilities. The Department's construction projects are regulated under the statewide permit, and projects performed by other entities on the Department's right-of-way (encroachments) are regulated by the State Water Resources Control Board's Statewide General Construction Permit. All construction projects require a Storm Water Pollution Prevention Plan to be prepared and implemented during construction.

### **Affected Environment**

The Los Angeles Regional Water Quality Control Board (LARWQCB) has jurisdiction for the Ventura County portion and the Central Coast Regional Water Quality Control Board (CCRWQCB) for the Santa Barbara County portion of the project.

The receiving water bodies for the Santa Barbara County portion of the project are Carpinteria Creek, Pacific Ocean at Carpinteria State Beach (Carpinteria Creekmouth, Santa Barbara County), Rincon Creek and the Pacific Ocean at Point Rincon (mouth of Rincon Cr., Santa Barbara County). The Hydrologic Area is South Coast and Hydrologic Sub Area (HAS) number is 315.34. There is one receiving water body, Rincon Beach, within the Ventura County section. The Hydrologic Area and the HAS are undefined and 401.00, respectively.

Section 303(d) of the Federal Clean Water Act (CWA), requires States to identify waters that do not meet water quality standards after applying effluent limits for point sources other than POTWs that are based on the best practicable control technology currently available and effluent limits for POTWs based on secondary treatment. States are then required to prioritize waters/watersheds for total maximum daily loads (TMDL) development. States are to compile this information in a list and submit the list to U.S.EPA for review and approval. This list is known as the 303(d) list of impaired waters (303(d) list).

The State Water Resources Control Board (the State Water Board) and Regional Water Quality Control Boards have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to develop TMDLs<sup>4</sup>.

All the above-mentioned receiving water bodies are on the 2006 303d list. Their pollutants of concerns (POCs) are: pathogens, fecal coliform, total coliform, boron, toxicity and indicator bacteria.

The project limits are located in both South Coast and Pitas Point watersheds. The South Coast watershed has no Regional Water Quality Control Board special requirements or concerns, including Total Maximum Daily Loads(TMDL) and pollutant limits. Pitas Point watershed is one of four coastal watershed groups under the Miscellaneous Ventura Coastal Watersheds: Pitas Point, Buenaventura, Oxnard and Ventura Coastal Streams Subwatersheds. These subwatersheds are physically independent from each other. Oxnard is the only subwatershed that currently has an established TMDL for Santa Clara River Estuary/Surfers' Knoll, McGrath State Beach, and Mandalay Beach Coliform and Beach Closures.

### ***Environmental Consequences***

Regarding Total Maximum Daily Loads for Santa Clara River Estuary/Surfers' Knoll, McGrath State Beach, and Mandalay Beach Coliform and Beach Closures, the Department is not a responsible party in TMDL and would not contribute to TMDLs.

### **Avoidance, Minimization and/or Mitigation Measures**

Avoidance and minimization measures for storm water are accomplished by implementation of approved Best Management Practices (BMPs), which are generally broken down into four categories: Pollution Prevention, Treatment, Construction, and Maintenance BMPs. The Department's Storm Water Program contains guidance for implementation of each of these BMPs. Certain projects may require installation and maintenance of permanent controls to treat storm water. Selection and design of permanent project BMPs is refined as the project progresses through the planning stage and into final design.

Construction Site BMPs for this project shall include the following categories:

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4 TMDLs are documents that describe a specific water quality attainment strategy for a water body and related impairment identified on the 303(d) list. TMDLs may include more than one water body and more than one pollutant. The TMDL defines specific measurable features that describe attainment of the relevant water quality standards. TMDLs include a description of the total allowable level of the pollutant(s) in question and allocation of allowable loads to individual sources or groups of sources of the pollutants of concern.

- Soil stabilization Practices
- Sedimentation Control Practices
- Tracking Control Practices
- Wind Erosion Controls
- Non-Storm Water Controls
- Waste Management and Materials Pollution Controls

### **2.2.3 Geology/Soils/Seismic**

#### **Regulatory Setting**

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under the California Environmental Quality Act.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. The Department’s Office of Earthquake Engineering is responsible for assessing the seismic hazard for the Department’s projects. The current policy is to use the anticipated Maximum Credible Earthquake(MCE) readings from young faults in and near California. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

#### **Affected Environment**

A preliminary Geotechnical Report was prepared by the Department’s Division of Engineering Services, Office of Geotechnical Design–South 1 on May 14, 2008. The report is based upon literature research, review of the previous field investigations, and a field review performed on April 10, 2008.

The proposed project area is located within the Transverse Ranges. The Transverse Ranges (or more accurately, the Los Angeles Ranges) are a group of mountain ranges of southern California, one of the various North American Coast Ranges that run along the Pacific coast from Alaska to Mexico. They begin at the southern end of the California Coast Ranges and lie between Santa Barbara and San Diego counties. They derive the name Transverse Ranges due to their East-West orientation, as opposed to the general North-South orientation of most of California's coastal mountains, thereby transversing them.

The project lies along the Pitas Point Quadrangle in Ventura and Carpinteria Quadrangle in Santa Barbara County. The land portion of this quadrangle is mostly mountainous terrain bordering the Pacific Ocean to the west. The small, rural communities of La Conchita and Mussel Shoals are located along the coastline in this area. A geological map of the Ventura and Pitas Point quadrangle by Dibblee, 1988 and Carpinteria Quadrangle in Santa Barbara by Dibblee, 1986 shows that most of this section of the U.S. 101 in this region lies on alluvium. Alluvium (from the Latin, *alluvius*, from *alluere*, "to wash against") is soil or sediments deposited by a river or other running water. Alluvium is typically made up of a variety of materials, including fine particles of silt and clay and larger particles of sand and gravel which is unconsolidated floodplain deposits of silt, sand, and gravel. Pico formation lies on the hills on the east side of the highway. Pico formation is mostly light gray to tan sandstone, well bedded, and in some places pebble-like and including some interbedded claystone. Landslide debris lie on certain locations on the east side of the highway.

### **Seismicity**

The project is located in a seismically active area. Earthquakes have been experienced in the past and can be expected to continue. A moderate seismic event on the Red Mountain fault or a larger seismic event on the Ventura-Pitas Point fault and M. Ridge- Arroyo Parida-Santa Ana fault would most likely produce the greatest bedrock acceleration.

A fault is considered by the State of California to be active if geological evidence indicates that movement on the fault has occurred in the last 11,000 years and potentially active if the movement is demonstrated to have occurred in the last 2 million years. Distances to major faults from La Conchita are 0.56 miles from Red Mountain and 3.30 miles from Ventura–Pitas Point with Maximum Credible Earthquake (MCE) of 7.25 and 3.80 miles from M.Ridge-Arroyo Parida-Santa Ana with a MCE of 7.50.

### **Ground Shaking**

Ground shaking is the primary cause of structural damage during an earthquake. It is considered the most likely damage producing phenomenon for this project. The magnitude, duration, and vibration frequency characteristics vary depending on the particular causative fault and its distance from the project.

The Red Mountain Fault could produce a Maximum Credible Earthquake of 7.25 Mw along this fault system. The Ventura Pitas Point fault can produce a MCE of 7.25 Mw (Mw = Moment Magnitude value of which is obtained from seismologists for a particular seismic event, it replaces the traditional Richter Scale system of measurement).

**Ground Rupture**

The U.S. 101 passes through the Red Mountain Fault north of Carpinteria Avenue in La Conchita. The intersection of the fault and the highway lies north of proposed soundwall #104 in La Conchita. According to the Alquist Priolo Fault zones of Southern California, Pitas Point Quadrangle 7.5 minute Map, La Conchita is outside the fault hazard zone and is less likely to be affected by rupture. Based on the regression of displacement and moment magnitude by Wells and Coppersmith (1994) the area within the rupture zone can experience an average displacement of 2.3 feet to maximum displacement of about 6 feet during the event of maximum credible earthquake of 7.25 Mw.

**Liquefaction**

Liquefaction typically occurs over widespread areas during long-duration, strong ground motion generally exceeding 0.15 g peak ground acceleration (**g-force** is a measurement of an object's acceleration expressed in gs. It quantifies the reaction force resulting from this acceleration or, more correctly, the net effect of that acceleration and the acceleration imparted by natural gravity as subjectively experienced by an object). These ground motions typically are produced by large magnitude earthquakes, exceeding magnitude (Mw) 6.5. Liquefaction-related damage is generally seen in recently alluviated areas that contain loose, saturated, cohesion free soil.

Virtually all parts of the project area are susceptible to liquefaction-related hazards. Extension of young gravel, sand, and silt deposits in the Oxnard Plain and along the Santa Clara River, shallow groundwater, and the presence of nearby potentially active faults indicate that possibility. Deposits most susceptible to liquefaction are non-engineered artificial fill placed over estuarine sediment (tidal mud), and latest Holocene era (9600 BC) stream deposits. Other susceptible deposits include Holocene estuarine deposits, Holocene stream terrace deposits, Holocene beach and dune sands, Holocene undifferentiated alluvium, and Holocene basin deposits. These cover nearly all parts of the project area.

**Groundwater**

The groundwater levels monitored using water level indicator by Boyle Engineering Corporation in June 2007 in the La Conchita area shows presence of groundwater at the depth of 15-15.5 feet from ground surface. The groundwater gradient is towards the beach. Groundwater conditions vary seasonally due to changes in the runoff, tidal and storm conditions, rainfall and other factors.

## **Environmental Consequences**

Under the NO BUILD alternative, existing conditions would remain and no impacts Geology, Soils or Seismic would occur.

### ***Ground Shaking/Ground Rupture and Liquefaction***

The Department's Division of Engineering Services, Office of Geotechnical Design—South 1 analyzed the potential for the project features to be affected by the results of earthquakes. Ground shaking, ground rupture, and liquefaction all have the potential to occur. Less than adverse impacts are expected to occur for the BUILD alternatives.

### ***Landslides***

The project area has a history of landslides; major landslides have occurred over the last several decades. The proposed project alternatives would be constructed on predominately level ground within the roadway and would not require major grading activities that would cut into the hillside. The proposed project would not increase or decrease the potential for landslides, so no impacts are anticipated for the BUILD alternatives.

## **Avoidance, Minimization and/or Mitigation Measures**

The proposed project structures would be built to current design standards to withstand ground shaking/ground rupture and liquefaction.

## **2.2.4 Paleontology**

### **Regulatory Setting**

Paleontology is the study of life in past geologic time based on fossil plants and animals. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized or funded projects. (e.g., Antiquities Act of 1906 [16 USC 431-433], Federal-Aid Highway Act of 1935 [20 USC 78]). Under California law, paleontological resources are protected by the California Environmental Quality Act, the California Code of Regulations, Title 14, Division 3, Chapter 1, Sections 4307 and 4309, and Public Resources Code Section 5097.5.

### **Affected Environment**

U.S. 101 between the U.S.101/SR 150 Interchange, and Carpinteria Creek in Santa Barbara County is underlain by quaternary alluvium, and quaternary older alluvium.



## **Environmental Consequences**

Quaternary alluvium and quaternary older alluvium are considered to have a low potential to contain sensitive paleontological resources in Paleontological Sensitivity Mapping Project (PSMP), the Department 2000. South of SR 150, the highway is underlain by Pliocene-aged Santa Barbara and Sisquoc Formations, and Miocene-aged Monterey Formation. These formations have a high potential to contain sensitive paleontological resources according to PSMP.

## **Avoidance, Minimization and/or Mitigation Measures**

It is recommended that a qualified paleontological monitor oversee all excavations in the high sensitivity formations described above. If sensitive paleontological resources are discovered during construction, work will be stopped in the immediate vicinity of the discovery (30-foot radius) until the fossils can be properly preserved, labeled and stored.

### **2.2.5 Hazardous Waste/Materials**

#### **Regulatory Setting**

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)

- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the Federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

### **Affected Environment**

A Hazardous Waste/Materials Assessment was completed by the Department's Office of Environmental Engineering and Corridor Studies, Hazardous Waste Branch on March 25, 2008 based on a Site Investigation Report that was completed on March 17, 2008 evaluating aerially deposited lead (ADL), heavy metals, and groundwater.

To test for lead, soil samples were collected from the proposed location of the HOV lanes alongside the left shoulders of the existing northbound and southbound U.S. 101 as well as at four proposed preliminary soundwall locations. The maximum depth of sampling was two feet, because the proposed median cross-sections as well as the standard structural soundwall plans (supported by either footing or pile) indicate the depth of the excavations would be on the same order.

A hydraulic direct-push sampling rig and a 2 1/2 inch diameter hand-auger were used to collect 335 soil samples from 112 boring locations from within the project limits. The hand auger was used to collect soil samples in areas that were inaccessible to the direct push rig. Soil samples were collected between December 17, 2007 and January 22, 2008. Borings were extended to a maximum depth of two feet. Soil samples were analyzed for total lead following the United States Environmental Protection Agency (EPA) Test Method 6010B. When deemed necessary, selected soil samples were tested for soluble lead, pH, and/or TCLP (Toxicity Characteristic Leaching Procedure) as well as the heavy metals.

Hollow-stem auger drilling rigs were utilized to drill borings for installing groundwater monitoring wells near Mussel Shoals, La Conchita, and Bailard Avenue northbound

offramp and onramp near the preliminary location of soundwalls on January 10, 2008 and January 11, 2008. The monitoring well depth was either 20 or 40 feet, depending on the anticipated depth of dewatering. The drilling and installation of monitoring wells were permitted by governing agency, Ventura County Water Resource Division or Santa Barbara County Fire Prevention Division, and in accordance with the California Department of Water Resources Bulletin 74-90 California Wells.

### **Environmental Consequences**

There would be no direct impacts associated with hazardous wastes/materials under the NO BUILD Alternative.

For BUILD Alternatives, the Department of Toxic Substances Control (DTSC) has granted the Department's District 7 (Los Angeles and Ventura Counties) a variance allowing reuse of Aerially Deposited Lead (ADL) contaminated soils at the hazardous concentrations within the project limit under certain conditions. Since this is a District 7 project, the variance might be applicable throughout. When hazardous ADL soils are reused within the project limits, their locations and details should be shown on the design and as-built plans.

From the southern project limits in Ventura County just west of Mobil Pier Undercrossing (PM 39.8) to 500 feet north of Rincon Road in Santa Barbara County, the soils in the median were determined to be non-hazardous (Type X). The excavation and management of these soils is not regulated. These soils could be reused within the project limit or relinquished to the contractor without any restrictions. In some of the other areas depending on the excavation scheme, non-hazardous soils (TypeX) may be encountered as described in the Hazardous Waste Assessment dated 3/25/08.

From 500 feet north of Rincon Road to 400 feet south of Palmetto Way in Santa Barbara County the soils were found to be contaminated with Aerially Deposited Lead at hazardous concentrations. These soils are regulated under the DTSC Variance and Assembly Bill 414. The variance is invoked if these materials are encountered during construction excavation. The hazardous soils should be placed more than five feet above the highest groundwater level and covered with a minimum of one foot of clean soil (soft cover). All surplus soil shall be treated as hazardous waste and be transported to and disposed at a Class I facility per Title 22 of the California Code of Regulation (CCR).

From 400 feet south of Palmetto Way to the end of the project limits (0.44 miles south of Casitas Pass Road in Santa Barbara County), the soils were found to be contaminated with Aerially Deposited Lead to a higher level. These soils are regulated by the

Department of Toxic Substance Control (DTSC) Variance and Assembly Bill 414. The Variance is invoked when these materials are encountered during construction, and contaminated soils should be placed no more than five feet above the highest groundwater level and covered with pavement (hard cover). The location and details should be shown on the plans. All surplus soils shall be treated as hazardous waste by the State of California and shall be transported to and disposed of at a Class I facility per Title 22 of the California Code of Regulations (CCR).

Besides lead in the form of ADL, which is addressed above, no heavy metals were detected above their threshold limits in the soil samples collected from the median and soundwall locations.

During the drilling for the observation wells, no groundwater was encountered. In addition, several days after the monitoring wells were installed, inadequate amounts (0.0 to 2.37 feet) of water were collected in each of the wells, although measurements were made after substantial rainfall through mid-January 2008.

The paint and/or thermoplastic yellow stripes and markings, which are placed along the left edge-of-travel way, generally contain lead and chromium which may contain a hazardous concentration depending on the removal procedure. The white stripes and markings also contain lead and chromium at the concentrations below the threshold.

### **Avoidance, Minimization and/or Mitigation Measures**

Aerially Deposited Lead was found to be present in different concentrations within the project limits. Per the Department's requirements, the contractor would prepare a project-specific Lead Compliance Plan to prevent or minimize field personnel exposure to lead-contaminated soil. The plans should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other appropriate health and safety protocols and procedures for handling lead contaminated soil.

Removal and Disposal of Lead and Chromium in yellow and white stripes and markings (if any) would be addressed during the Design Phase. The appropriate methodology and special provisions for proper removal and disposal would be provided and followed during construction regarding handling the existing yellow stripes and markings and adjacent pavement.

## 2.2.6 Air Quality

### Regulatory Setting

The Federal Clean Air Act (FCAA), as amended in 1990, is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act (CCAA) of 1988. These laws set standards for the concentration of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM), lead (Pb), and sulfur dioxide (SO<sub>2</sub>). The United States Environmental Protection Agency (USEPA) designates areas with pollutant concentrations that do not meet the NAAQS as non-attainment. States are then required to prepare a State Implementation Plan (SIP) for the non-attainment areas. The SIP demonstrates how the area will achieve the NAAQS by the prescribed deadlines and what measures will be needed to attain the standards. The USEPA also oversees implementation of the prescribed measures. Areas that achieve the NAAQS after a non-attainment designation are re-designated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the NAAQS.

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation may not fund, authorize, or approve federal actions to support programs or projects that are not first found to conform to the purpose of the SIP. Conformity with the purpose of the SIP takes place on two levels – at the regional level and at the project level. The proposed project must meet the conformity requirement at both levels before any federal actions are made.

Regional conformity is concerned with how well a region is meeting the standards set for the criteria pollutants. Santa Barbara County is in attainment of all NAAQS while Ventura County is in attainment of all criteria pollutants except for 8-hour O<sub>3</sub> (moderate attainment). At the regional level, Regional Transportation Plans are developed by regional or metropolitan planning organizations (MPOs) such as SCAG for Ventura County and SBCAG for Santa Barbara County which include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the Regional Transportation Plan, an air quality model is run to determine whether or not the implementation of those projects would meet the emission budgets, conform to the purpose of the SIP, and meet the statutory requirements of the Clean Air Act. The RTPs are adopted by the MPOs and the USDOT then determines, in consultation with USEPA and other interagency partners, if the regional conformity analysis is adequate and satisfactory. If the design and scope of the proposed

transportation project are the same as described in the Regional Transportation Plan, then the proposed project is deemed to have met the regional conformity requirements and to conform to the purpose of the SIP.

Conformity at the project-level requires “hot spot” analysis if an area is in “non-attainment” or “maintenance” for carbon monoxide (CO) and/or particulate matter. Conformity includes some specific standards for projects that require a hot spot analysis. In general, projects must not create a new violation, contribute to an existing violation, or delay timely attainment of the standard.

### **Affected Environment**

An Air Quality Assessment was prepared to evaluate potential air quality impacts by the Department’s Office of Environmental Engineering and Corridor Studies on April 1, 2008.

#### **Climate and Meteorology**

Surface and upper-level wind flow varies both seasonally and geographically and inversion conditions common to the area can affect the vertical mixing and dispersion of pollutants. Semi-permanent high pressure that lies off the Pacific Coast leads to limited rainfall (around 18 inches per year), with warm, dry summers and relatively damp winters. Maximum summer temperatures average about 70 degrees Fahrenheit near the coast and in the high 80s to 90s inland. During winter, average minimum temperatures range from the 40s along the coast to the 30s inland. Additionally, cool, humid, marine air causes frequent fog and low clouds along the coast, generally during the night and morning hours in the late spring and early summer. The fog and low clouds can persist for several days until broken up by a change in the weather pattern.

The air above the project site often exhibits weak vertical and horizontal dispersion characteristics, which limit the dispersion of emissions and cause increased ambient air pollutant levels. Persistent temperature inversions prevent vertical dispersion. The inversions act as a “ceiling” that prevents pollutants from rising and dispersing. Mountain ranges act as “walls” that inhibit horizontal dispersion of air pollutants. The land/sea breeze pattern common in the area recirculates air contaminants. Air pollutants are pushed toward the ocean during the early morning by the land breeze, and toward land during the afternoon, by the sea breeze. This creates a “sloshing” impact, causing pollutants to remain in the area for several days. Residual emissions from previous days accumulate and chemically react with new emissions in the presence of sunlight, thereby increasing Ozone levels. This pollutant “sloshing” impact happens most frequently from

May through October (“smog” season). Air temperatures are usually higher and sunlight more intense during the “smog” season.

The prevailing sea breeze in the southern portion of the county is from the southwest. During summer, these winds are stronger and persist later into the night. At night, the sea breeze weakens and is replaced by light land breezes (from land to sea). The alternation of the land-sea breeze cycle can sometimes produce a "sloshing" impact, where pollutants are swept offshore at night and subsequently carried back onshore during the day. This impact is exacerbated during periods when wind speeds are low.

Santa Ana winds are northeasterly winds that occur primarily during fall and winter, but occasionally in spring. These are warm, dry winds blown from the high inland desert that descend down the slopes of a mountain range. Wind speeds associated with Santa Ana's are generally 15-20 mph, though they can sometimes reach speeds in excess of 60 mph. During Santa Ana conditions, pollutants emitted in Santa Barbara, Ventura County, and the South Coast Air Basin (the Los Angeles region) are moved out to sea. These pollutants can then be moved back onshore in what is called a "post-Santa Ana" condition. Not all post-Santa Ana conditions, however, lead to high pollutant concentrations in Santa Barbara County.

Upper-level winds (measured at Vandenberg Air Force Base once each morning and afternoon) are generally from the north or northwest throughout the year, but occurrences of southerly and easterly winds do occur in winter, especially during the morning. Upper-level winds from the south and east are infrequent during the summer. When they do occur, they are usually associated with periods of high ozone levels. Surface and upper-level winds can move pollutants that originate in other areas into Ventura or Santa Barbara County.

Surface temperature inversions (0-500 ft) are most frequent during the winter, and subsidence inversions (1000-2000 ft) are most frequent during the summer. Inversions are an increase in temperature with height and are directly related to the stability of the atmosphere. Inversions act as a cap to the pollutants that are emitted below or within them and ozone concentrations are often higher directly below the base of elevated inversions than they are at the earth's surface. For this reason, elevated monitoring sites will occasionally record higher ozone concentrations than sites at lower elevations. Generally, the lower the inversion base height and the greater the rate of temperature increase from the base to the top, the more pronounced effect the inversion will have on inhibiting vertical dispersion. The subsidence inversion is very common during summer along the California coast, and is one of the principal causes of air stagnation.



Poor air quality is usually associated with "air stagnation" (high stability/restricted air movement). Therefore, it is reasonable to expect a higher frequency of pollution events where light winds are frequently observed, as opposed to areas where the prevailing winds are usually strong and persistent.

The climatological station closest to the Santa Barbara County portion of the site that monitors temperature is the Santa Barbara Station (#047902) is maintained by the Western Regional Climate Center. The annual average maximum temperature recorded from January 1997 to December 2000 at this station is 21.3C (70.3F), and the annual average minimum is 11.2 (52.1°F). The Oxnard Station (# 046569) is maintained by the Western Regional Climate Center for the Ventura County site. The annual average maximum temperature recorded from January 1997 to December 2000 at this station was 21.3°C (70.3°F), and the annual average minimum was 11.2°C (52.2°F).

## **Environmental Consequences**

### ***Regional Air Quality Conformity***

The proposed project is located in the South Central Coast Air Basin (Basin). The Basin is comprised of San Luis Obispo, Santa Barbara, and Ventura Counties. The proposed project is located in Ventura County (3.8 miles) and in Santa Barbara County (2.2 miles). The primary agencies responsible for regulations to improve air quality in the Basin are the Ventura County Air Pollution Control District (VCAPCD), Santa Barbara County Air Pollution Control District (SBCAPCD), and the California Air Resources Board (CARB). The Southern California Association of Governments (SCAG) and the Santa Barbara County Association of Governments (SBCAG) are important partners to the VCAPCD and SBCAPCD, respectively, as they are the designated metropolitan planning authority for the respective area and produce estimates of anticipated future growth and vehicular travel in the Basin, which are used for air quality planning and analyses.

The proposed project is fully funded and is included in the Ventura County 2004 RTP. The 2004 RTP was found to conform by SCAG on April 1, 2004 as Resolution #06-471-3 and approved by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) on June 7, 2004. The project is also included in SCAG financially constrained 2006 Regional Transportation Improvement Program (RTIP) as Resolution #06-477-2. The SCAG 2006 RTIP was found to conform by FHWA and FTA on October 2, 2006. The design concept and scope of the proposed project is consistent with the project description in the 2004 RTP Amendment #3, the 2006 RTIP and the assumptions in SCAG's regional emissions analysis.

As the designated Metropolitan Planning Organization (MPO) for Santa Barbara County, the Santa Barbara County Association of Governments (SBCAG) is responsible for preparing and adopting the Metropolitan Transportation Plan (MTP). The proposed project is fully funded and included in the Santa Barbara County 2004 Metropolitan Transportation Program (MTP) and the 2006 SBCAG Regional Transportation Improvement Program (RTIP), adopted by SBCAG on January 19, 2006. Santa Barbara County is in attainment of all standards for Federal criteria pollutants in the National Ambient Air Quality Standards (NAAQS); therefore, conformity requirements do not apply. The proposed project's capital costs are funded by the Corridor Mobility Improvement Account (CMIA—Proposition 1B) program and the Congestion Management Air Quality (CMAQ) program. Support costs are funded by the State Transportation Improvement Plan's (STIP) Interregional Improvement Program that is The Department's' portion of the STIP. Therefore, because of the regional significance of the project, and the use of federal funds in Ventura County, the Santa Barbara portion has been included in SBCAG's Federal Transportation Improvement Plan.

Since the passage of the Federal Clean Air Act and subsequent amendments, the Environmental Protection Agency has established and revised the National Ambient Air Quality Standards (NAAQS). The NAAQS was established for six major pollutants or criteria pollutants. The NAAQS are two tiered: primary, to protect public health; and secondary, to prevent degradation to the environment (i.e., impairment of visibility, damage to vegetation and property). The six criteria pollutants are ozone (O<sub>3</sub>), carbon monoxide (CO), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide(SO<sub>2</sub>), and lead (Pb).

Based upon Federal approval of the air quality conformity findings in the SCAG 2004 RTP Amendment 3 and 2006 RTIP and Santa Barbara County's federal attainment status of criteria pollutants standards per the National Ambient Air Quality Standards (NAAQS); the regional analysis for the project is considered complete and the project as a whole is considered to be in conformance with the Clean Air Act on a regional level.

A brief explanation of each pollutant, effects and sources is presented in Table 2.2-1 on the next page.

**Table 2.2-1 State and Federal Criteria Air Pollutant Stds, Effects and Sources**

Pollutant	Averaging Time	State Standard	Federal Standard	Health and Atmospheric Effects	Typical Sources
Ozone (O <sub>3</sub> ) <sup>a</sup>	1 hour 8 hours	0.09 ppm 0.070 ppm	— <sup>b</sup> 0.075 ppm	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include a number of known toxic air contaminants.	Low-altitude ozone is almost entirely formed from reactive organic gases (ROG) and nitrogen oxides (NO <sub>x</sub> ) in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes. Biologically-produced ROG may also contribute.
Carbon Monoxide (CO)	1 hour 8 hours 8 hours (Lake Tahoe)	20 ppm 9.0 ppm <sup>c</sup> 6 ppm	35 ppm 9 ppm —	Asphyxiant. CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Respirable Particulate Matter (PM <sub>10</sub> ) <sup>a</sup>	24 hours Annual	50 µg/m <sup>3</sup> 20 µg/m <sup>3</sup>	150 µg/m <sup>3</sup> —	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of PM <sub>10</sub> .	Dust- and fume-producing industrial and agricultural operations; combustion smoke; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources (wind-blown dust, ocean spray).
Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>a</sup>	24 hours Annual	— 12 µg/m <sup>3</sup>	35 µg/m <sup>3</sup> 15 µg/m <sup>3</sup>	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – considered a toxic air contaminant – is in the PM <sub>2.5</sub> size range. Many aerosol and solid compounds are part of PM <sub>2.5</sub> .	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions involving other pollutants including NO <sub>x</sub> , sulfur oxides (SO <sub>x</sub> ), ammonia, and ROG.
Nitrogen Dioxide (NO <sub>2</sub> )	1 hour Annual	0.18 ppm 0.03 ppm —	— 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain.	Motor vehicles and other mobile sources; refineries; industrial operations.
Sulfur Dioxide (SO <sub>2</sub> )	1 hour 3 hours 24 hours Annual	0.25 ppm — 0.04 ppm —	— 0.5 ppm 0.14 ppm 0.030 ppm	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing.
Lead (Pb) <sup>d</sup>	Monthly Quarterly	1.5 µg/m <sup>3</sup> —	— 1.5 µg/m <sup>3</sup>	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also considered a toxic air contaminant.	Primary: lead-based industrial process like battery production and smelters. Past: lead paint, leaded gasoline. Moderate to high levels of aerially deposited lead from gasoline may still be present in soils along major roads, and can be a problem if large amounts of soil are disturbed.

Sources: California Air Resources Board Ambient Air Quality Standards chart, 05/17/2006 (<http://www.arb.ca.gov/aqs/aaqs2.pdf>)  
Sonoma-Marin Area Rail Transit Draft Air Pollutant Standards and Effects table, November 2005, page 3-52.

U.S. EPA and California Air Resources Board air toxics websites, 05/17/2006

Notes: ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter

a Annual PM10 NAAQS revoked October 2006; was 50 µg/m<sup>3</sup>. 24-hr. PM2.5 NAAQS tightened October 2006; was 65 µg/m<sup>3</sup>.

b 12/22/2006 Federal court decision may affect applicability of Federal 1-hour ozone standard. Prior to 6/2005, the 1-hour standard was 0.12 ppm. Case is still in litigation.

c Rounding to an integer value is not allowed for the State 8-hour CO standard. A violation occurs at or above 9.05 ppm.

d The ARB has identified lead, vinyl chloride, and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM10 and, in larger proportion, PM2.5. Both the ARB and U.S. EPA have identified various organic compounds that are precursors to ozone and PM2.5 as toxic air contaminants. There is no threshold level of exposure for adverse health effect determined for toxic air contaminants, and control measures may apply at ambient concentrations below any criteria levels specified for these pollutants or the general categories of pollutants to which they belong.

### Project Level Conformity

The California Air Resources Board (CARB) and local management districts, Air Pollution Control District (APCD) operate a regional air quality-monitoring network in the South Central Coast Air Basin (Basin) that provides information on ambient concentration criteria air pollutants. The entire study area is within the Basin. A portion of the project area (2.2 miles) is located in Santa Barbara County and is governed by the SBCAPCD. The remaining section (3.8 miles) is located in Ventura County and governed by the VCAPCD. Areas not in compliance with the AAQS are deemed non-attainment areas.

Areas that have insufficient data to make a determination are deemed unclassified, and are treated as being attainment areas until proven otherwise. Using the ambient air monitoring data collected at the monitoring stations around Santa Barbara and Ventura counties, the Environmental Protection Agency (EPA) and CARB determine whether the counties are in attainment of the federal and state air quality standards.

The Basin is divided into 30 air-monitoring areas with a designated ambient air monitoring station representative of each area. Tables 2.2-2 and 2.2-3 (next page) show criteria pollutants emission data taken from three monitoring sites closest to the project site. Nitrogen Dioxide (NO<sub>2</sub>) and Ozone (O<sub>3</sub>) data was obtained from the Ventura-Emma Wood State Beach Station; Particulate Matter (PM<sub>10</sub>, PM<sub>2.5</sub>) and Carbon Monoxide (CO) measurements were obtained from the Santa Barbara – 700 East Canon Perdido Station; Sulfur Dioxide (SO<sub>2</sub>) data was obtained from the Exxon Site 10 – UCSB West Campus Monitoring Station. The most recent data available from this station encompasses the years 2004 to 2006.

**Table 2.2-2 Designations of Criteria Pollutants in Ventura Co. (Fed.&State)**

Criteria Pollutant	Federal Standard (National Ambient Air Quality Standards)	Federal Attainment Status	California State Standard	State Attainment Status
Carbon Monoxide (CO)	35 ppm (1-hour avg.) 9.0 ppm (8-hour avg.)	<b>Attainment Unclassified</b>	20 ppm (1 hour avg.) 9.0 ppm (8 hour avg.)	<b>Attainment/ Maintenance</b>
Nitrogen Dioxide (NO <sub>2</sub> )	0.053 ppm	<b>Attainment/ Unclassified</b>	0.030 ppm (annual avg.) 0.18 ppm (1-hour avg.)	<b>Attainment</b>
Ozone (O <sub>3</sub> )	1 avg. hour revoked 6/15/05	<b>Revoked by EPA 6/15/05*</b>	0.09 ppm (1-hour avg.)	<b>Non- Attainment</b>
Ozone (O <sub>3</sub> )	0.075 ppm (8 hour avg)	<b>Moderate Non- Attainment</b>	0.070 ppm (8-hour avg.)	<b>Non- Attainment</b>
Particulate Matter (PM <sub>10</sub> )	150 µg/m <sup>3</sup> (24 hour avg.)	<b>Attainment/ Unclassified</b>	50 µg/m <sup>3</sup> (24 hour avg.) 20 µg/m <sup>3</sup> (annual avg.)	<b>Non- Attainment</b>
Particulate Matter (PM <sub>2.5</sub> )	35 µg/m <sup>3</sup> (24 hour avg) 15 µg/m <sup>3</sup> (annual arithmetic mean)	<b>Attainment/ Unclassified</b>	12 µg/m <sup>3</sup> (annual avg.)	<b>Non- Attainment</b>

Source: Air Resources Board and The Department's Air Quality Report 4/1/08

ppm=parts per million

National Ambient Air Quality Standard (NAAQS) California Ambient Air Quality Standard (CAAQS)

\*1-hour Ozone federal attainment standard revoked after 8-hour standard implemented

**Table 2.2-3 Designations of Criteria Pollutants in Santa Barbara Co.(Fed.&State)**

Criteria Pollutant	Federal Standard (NAAQS)	Federal Attainment Status	State Standard (CAAQS)	State Attainment Status
Carbon Monoxide (CO)	35 ppm (1 hour avg) 9.0 ppm (8 hour avg)	<b>Attainment</b>	20 ppm (1 hour avg.) 9.0 ppm (8 hour avg.)	<b>Attainment</b>
Nitrogen Dioxide (NO <sub>2</sub> )	0.053 ppm (annual avg.)	<b>Attainment</b>	0.18 ppm (1-hour avg )	<b>Attainment</b>
Ozone (O <sub>3</sub> )	1 avg. hour revoked 6/15/05	<b>Revoked by EPA 6/15/05*</b>	0.09 ppm (1-hour avg.)	<b>Attainment</b>
Ozone (O <sub>3</sub> )	0.075 ppm (8 hour avg)	<b>Attainment</b>	0.070 ppm (8 hour avg)	<b>Non-attainment</b>
Particulate Matter (PM <sub>10</sub> )	150 µg/m <sup>3</sup> (24 hour avg.)	<b>Attainment</b>	50 µg/m <sup>3</sup> (24 hour avg.) 20 µg/m <sup>3</sup> (annual avg)	<b>Non-Attainment (24-hour and annual)</b>
Particulate Matter (PM <sub>2.5</sub> )	35 µg/m <sup>3</sup> (24 hour avg) 15 µg/m <sup>3</sup> (annual arithmetic mean)	<b>Attainment Unclassified (24-hour annual) and</b>	12 µg/m <sup>3</sup> (annual avg.)	<b>Unclassified</b>

Source: Air Resources Board and The Department's Air Quality Report 4/1/08

ppm=parts per million

National Ambient Air Quality Standard (NAAQS) California Ambient Air Quality Standard (CAAQS)

\*1-hour Ozone federal attainment standard revoked after 8-hour standard implemented

Ventura and Santa Barbara County are in attainment of federal and state standards for Carbon Monoxide (CO) and the project was also found to be in conformance according to the Department's CO Protocol; therefore no further analysis is needed.

Ventura County is in attainment of federal standards for PM<sub>2.5</sub> and PM<sub>10</sub>; however, Ventura County does not meet the state standards for PM<sub>2.5</sub> and PM<sub>10</sub>. State of California Health and Safety Code Section 39614 requires air districts that violate state air quality standards for PM to adopt a schedule for implementing cost effective PM control measures. The two main sources of PM<sub>2.5</sub> are engine exhaust and PM formed in the atmosphere from other pollutants, such as Nitrogen Dioxide (NO<sub>2</sub>) and Reactive Organic Gases (ROG). These pollutants react chemically in the atmosphere to form PM<sub>2.5</sub>. Because existing District rules had already regulated these pollutants, VCAPCD staff did not propose new measures to control PM<sub>2.5</sub>. However, a schedule was developed for adopting new measures to reduce fugitive dust, a coarser form of PM, most commonly created by soil disturbed activities such as farming and construction operations, and strong winds blowing across disturbed and bare soil. The schedule included new fugitive dust control measures from the following sources: construction, earthmoving, demolition operation, bulk material handling, storage operations, agricultural operations, paved and unpaved roads, unpaved parking lots and staging areas, and weed abatement operations. The VCAPCD Board approved the PM control measures schedule on June 28, 2005.

Santa Barbara County is in attainment of federal standards for PM<sub>2.5</sub> and PM<sub>10</sub> and of the state standard for PM<sub>2.5</sub>; however, Santa Barbara County is designated as non-attainment

of the state standard for PM<sub>10</sub>. Since the proposed project is located in Ventura and Santa Barbara County which are in attainment of federal standards for PM<sub>2.5</sub> and PM<sub>10</sub>, a PM hot-spot analysis is not required. It was determined that this project meets the conformity requirements for PM<sub>2.5</sub> and PM<sub>10</sub> in accordance with the March 10, 2006 Final Rule without a qualitative hot-spot analysis. Activities associated with the proposed project are not expected to result in adverse impacts to air quality or cause new violations; and are therefore consistent with the purposes of the State Implementation Plan (SIP). The proposed project therefore is considered to have met the statutory requirements of the Federal Clean Air Act and National Environmental Protection Act (NEPA). Conformity requirements would not apply to Santa Barbara County which is in attainment of all federal criteria pollutant standards of the NAAQS, but would apply to Ventura County which is in non-attainment of Federal 1 hour and 8-hour Standards for Ozone; therefore, conformity requirements are applicable to projects in Ventura County.

### ***Naturally Occurring Asbestos***

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by state, federal, and international agencies and was identified as a toxic air contaminant by the CARB in 1986. All types of asbestos are hazardous and may cause lung disease and cancer.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations.

### ***Mobile Source Air Toxics (MSATs)***

In addition to the criteria air pollutants for which there are National Ambient Air Quality Standards (NAAQS), EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Federal Clean Air Act (FCAA). MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to



the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The EPA is the lead Federal Agency for administering the FCAA and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources (66 FR 17229, March 29, 2001). This rule was issued under the authority of Section 202 of the FCAA. In its rule, EPA examined the impacts of existing and newly issued mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, FHWA calculates that even with a 64 percent increase in Vehicle Miles Traveled (VMT), with these programs in place on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde will be reduced by 57 percent to 65 percent, and will reduce on-highway diesel Particulate Matter (PM) emissions by 87 percent.

California's vehicle emission control and fuel standards are more stringent than Federal standards, and are effective sooner, so the effect on air toxics of combined State and Federal regulations is expected to result in greater emission reductions, more quickly, than the FHWA analysis shows. The FHWA analysis, with modifications related to use of the California-specific EMFAC model rather than the MOBILE model, would be conservative.

### ***Unavailable Information Project Specific MSAT Impact Analysis***

The Air Quality Assessment includes a basic analysis of the likely MSAT emission impacts of this project per FHWA guidance. However, available technical tools do not enable us to predict the project-specific health impacts of the emission changes associated with the project alternatives in this IS/EA. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information:

#### ***Information that is Unavailable or Incomplete***

Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated



concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

### **Emissions**

The EPA and California tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. While both MOBILE 6.2 and EMFAC2007 versions are used to predict emissions at a regional level, they have limitations when applied at the project level. Both are trip-based models--emission factors are projected based on a typical trip of around 7.5 miles, and on average speeds for this typical trip. This means that neither model has the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, both models can only approximate emissions from the operating speeds and levels of congestion likely to be present on the largest-scale projects, and cannot adequately capture emissions effects of smaller projects. For particulate matter, the MOBILE 6.2 model results are not sensitive to average trip speed; however, particulate matter emissions from the EMFAC model are sensitive to trip speed. For California conditions diesel particulate matter emissions are treated the same as other emissions. Unlike MOBILE 6.2, the EMFAC model does not provide MSAT emission factors; off-model speciation of EMFAC's Total Organic Compounds output must be used to generate MSAT emissions. The emissions rates used in both MOBILE 6.2 and EMFAC are based on a limited number of vehicle tests.

These deficiencies compromise the capability of both MOBILE 6.2 and EMFAC2007 to estimate MSAT emissions. Both are adequate tools for projecting emissions trends, and performing relative analyses between alternatives for very large projects, but neither is sensitive enough to capture the effects of travel changes caused by smaller projects or to predict emissions near specific roadside locations.

### **Dispersion**

The tools to predict how MSATs disperse are also limited. The EPA's current regulatory models, CALINE3 and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide (CO) to determine compliance with the National Ambient Air Quality Standards (NAAQS). The CALINE4 model used in California is an improvement on the CALINE3- based EPA models, but was built primarily for CO analysis and has not been specifically validated for use with other materials such as MSATs. It would be difficult to use for averaging periods of less than 8 hours (health risk data for MSATs are typically based on 24-hr,

annual, and long- term (30-70 years) exposure). Dispersion models are appropriate for predicting maximum concentrations that can occur at some time at some location within a geographic area, but cannot accurately predict exposure patterns at specific times at specific locations across an urban area to assess potential health risk. The National Cooperative Highway Research Program is conducting research on best practices in applying models and other technical methods in the analysis of MSATs. This work also will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, FHWA is also faced with a lack of adequate monitoring data in most areas for use in establishing project-specific MSAT background concentrations.

### ***Exposure Levels and Health Effects***

Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways, and to determine the portion of a year that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

### ***Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs.***

Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies that show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or in animals that demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of EPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or state level.

The EPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The EPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at <http://www.epa.gov/iris>. The following toxicity information for the six prioritized MSATs was taken from the IRIS database:

- **Benzene** is characterized as causing decreased lymphocyte count and has non-cancer health endpoints of potential concern.
- **Acrolein** the primary health concern is not cancer, but rather a respiratory endpoint.
- **Formaldehyde** has respiratory endpoints and has non-cancer health endpoints of potential concern.
- **1,3-Butadiene** is characterized as causing ovarian atrophy and has non-cancer health endpoints of potential concern.
- **Acetaldehyde** is characterized as causing degeneration of the olfactory epithelium and has non-cancer health endpoints of potential concern.
- **Diesel exhaust** (DE) is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases. The particulate matter fraction of diesel exhaust (Diesel PM) has been identified by the CARB as a toxic air contaminant due to long-term cancer risk.
- **Diesel exhaust** is also connected with chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures may impair pulmonary function and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

There have been other studies that address MSAT health impacts in proximity to roadways. The Health Effects Institute, a non-profit organization funded by EPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway

MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes particularly respiratory problems. Much of this research is not specific to MSATs, instead surveys the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, they do not provide information that would be useful to alleviate the uncertainties listed above, nor enable us to perform a more comprehensive evaluation of the health impacts specific to this project.

***Relevance of Unavailable or Incomplete Information to Evaluating Reasonably Foreseeable Significant Adverse Impacts on the Environment, and Evaluation of Impacts Based upon Theoretical Approaches or Research Methods Generally Accepted in the Scientific Community***

Because of the uncertainties outlined above, a reliable quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools do allow us to reasonably predict relative emission changes between alternatives for larger projects, the amount of MSAT emissions from each of the project alternatives and MSAT concentrations or exposures created by each of the project alternatives cannot be predicted with enough accuracy to be useful in estimating health impacts. (As noted above, the current emissions model is not capable of providing a meaningful emissions analysis tool for smaller projects.) Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have "significant adverse impacts on the human environment."

***MSAT Emissions in the Project Area***

As discussed above, technical shortcomings of emission and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions, and effects of this project. However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project. Although a qualitative analysis cannot identify and measure health impacts from MSATs, it can give a basis for identifying and comparing the potential differences among MSAT emissions if any, from the various alternatives. Based on the FHWA MSAT analysis guidance (Federal Highway Administration, Memorandum: Interim Guidance on Air Toxics Analysis in NEPA Documents, February 3, 2006), the proposed project would be considered a project with potential meaningful differences in MSAT effects among

project alternatives. Therefore, the level of emissions for the six priority MSATs for the NO BUILD and all BUILD alternatives were evaluated.

The peak period traffic volume and speeds for both mainline and HOV lanes were obtained to determine existing and future Vehicle Miles Traveled (VMT) for all alternatives. The peak period used in the analysis is from 6:30am-9:00am for the morning peak and from 3:30pm-6:30 pm for the afternoon peak. The off-peak period is all other times. The VMT is calculated using the traffic data (number of vehicles) divided by the length of the proposed project. Based on EMFAC2007, CT-EMFAC estimates composite emission factors by area-specific data, such as population, mileage accrual, temperature, relative humidity, and vehicle mix.

For each of the project alternatives, MSAT emissions from vehicles in HOVs were estimated separately because vehicle mix and travel activities are different from those in mixed-flow lanes. MSAT emissions for all alternatives in the existing, opening, and horizon years are summarized in Tables 2.2-4 through 2.2-6, respectively.

**Table 2.2-4 Summary of MSAT Emissions in the Existing Year, 2006 (grams/day)**

Alternatives	Time Period	Truck %	Total VMT	Diesel PM	Formaldehyde	Butadiene	Benzene	Acrolein	Acetaldehyde
Existing Mixed-Flow Lanes	Peak	7.0	160,002	1,132	1,070	260	1,256	59	335
	Off-Peak	7.0	240,084	1,698	1,605	391	1,885	89	502

Source: The Department's Air Quality Study April 2008

The emissions are presented in grams per day of each pollutant for each scenario. Tables 2.2-5 and 2.2-6 show projected MSAT emissions in 2016 (opening year) and 2036 (horizon year), respectively.

Both 2016 and 2036 result in similar trends that indicate a decrease in MSAT emissions for all BUILD Alternatives when compared to the existing MSAT emissions. Because the proposed project is not expected to attract rerouted trips from elsewhere in the transportation network, estimated VMT for each of the BUILD Alternatives are expected to be the same MINIMUM BUILD and FULL BUILD have the same overall (mainline plus HOV) MSAT emissions. As shown in Tables 2.2-5 and 2.2-6, all BUILD emissions are slightly higher than the NO BUILD MSAT emissions although the VMT stayed the

**Table 2.2-5 Summary of MSAT Emissions for Year 2016 (in grams per day)**

Alternatives		Time Period	Truck %	Total VMT	Diesel PM	Formaldehyde	Butadiene	Benzene	Acrolein	Acetaldehyde
<b>Alt # 1</b> (No-BUILD)	MF Only	Peak	7.3	203,244	635	477	105	547	24	157
		Off-Pk	12.6	221,778	1,346	788	159	781	36	273
<b>Alt # 2</b> (Minimum Standard Part-Time HOV lane)	MF	Peak	9.2	162,906	661	452	96	488	22	152
		Off-Pk	12.6	221,778	1,346	788	159	781	36	273
	HOV	Peak	0	40,338	24	105	30	144	7	29
		Off-Pk	N/A; HOV lane in operation during peak periods only							
<b>Alt # 3</b> (Full Standard Part-Time HOV lane)	MF	Peak	9.2	162,906	661	452	96	488	22	152
		Off-Pk	12.6	221,778	1,346	788	159	781	36	273
	HOV	Peak	0	40,338	24	105	30	144	7	29
		Off-Pk	N/A; HOV lane in operation during peak periods only							

Source The Department's Air Quality Study April 2008

**Table 2.2-6 Summary of MSAT Emissions for Horizon Year 2036 (grams per day)**

Alternatives		Time Period	Truck %	Total VMT	Diesel PM	Formaldehyde	Butadiene	Benzene	Acrolein	Acetaldehyde
<b>Alt # 1</b> (No-BUILD)	MF Only	Peak	7.3	258,306	399	286	53	305	12	103
		Off-Pk	6.3	281,850	422	381	90	442	21	122
<b>Alt # 2</b> (Minimum Standard Part-Time HOV lane)	MF	Peak	9.2	207,042	395	261	54	277	12	90
		Off-Pk	6.3	281,850	453	462	114	541	26	144
	HOV	Peak	0	51,264	15	76	22	101	5	21
		Off-Pk	N/A; HOV lane in operation during peak periods only							
<b>Alt # 3</b> (Full Standard Part-Time HOV lane)	MF	Peak	9.2	207,042	395	261	54	277	12	90
		Off-Pk	6.3	281,850	453	462	114	541	26	144
	HOV	Peak	0	51,264	15	76	22	101	5	21
		Off-Pk	N/A; HOV lane in operation during peak periods only							

Source The Department's Air Quality Study April 2008

same. This increase in emissions would be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Regardless of alternative chosen, emissions would likely be lower than present levels in the design year as a result of EPA's and California's control programs that are projected to reduce MSAT emissions by at least 57 to 87% between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases when compared to the present level.

Both 2016 and 2036 result in similar trends that indicate a decrease in MSAT emissions for all BUILD Alternatives when compared to the existing MSAT emissions. Because the proposed project is not expected to attract rerouted trips from elsewhere in the transportation network, estimated VMT for each of the BUILD Alternatives are expected to be the same. MINIMUM BUILD and FULL BUILD have the same overall (mainline plus HOV) MSAT emissions. As shown in Tables 2.2-5 and 2.2-6, all BUILD emissions are slightly higher than the NO BUILD MSAT emissions although the VMT stayed the same. This increase in emissions would be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Regardless of alternative chosen, emissions would likely be lower than present levels in the design year as a result of EPA's and California's control programs that are projected to reduce MSAT emissions by at least 57 to 87% between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases when compared to the present level.

The additional travel lanes proposed as part of the project alternatives would have the effect of moving some traffic closer to nearby homes and/or businesses; therefore, under BUILD alternatives, there may be localized areas where ambient concentrations of MSATs could be higher under certain BUILD alternatives than the NO BUILD alternative. The CARB's "Air Quality and Land Use Handbook" identifies the following land uses as particularly sensitive to MSATs: residential areas, schools, hospitals and other health care facilities, day care and other child care facilities, and parks and playgrounds. However, as discussed above, the magnitude and the duration of these potential increases compared to the NO BUILD alternative cannot be accurately



quantified due to the inherent deficiencies of current models. When a highway is widened and, as a result, moves closer to receptors, the localized effect of a given amount of MSAT emissions for the BUILD alternatives may be higher relative to the NO BUILD alternative, but this should be offset due to increases in speeds and reductions in congestion. Also, MSATs would be lower in other locations when traffic shifts away from them. On a regional basis, the EPA and California vehicle fuel regulations and fleet turnover, would cause substantial reductions over time and in almost all cases, would cause region-wide MSAT levels to be significantly lower than today.

### ***Construction/Temporary Impacts***

Construction activities associated with the proposed project would be temporary and would last the duration of project construction. Currently, project construction is scheduled to start in early 2011 and the anticipated date of completion is 2015. The discussion below has concluded that project construction would not create adverse pollutant emissions for any of the alternatives under consideration. Short-term impacts to air quality would occur during minor grading/trenching, new pavement construction and the re-striping phase.

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and various other activities. Emissions from construction equipment also are anticipated and would include CO, nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOCs), directly-emitted particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NO<sub>x</sub> and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction would involve clearing, cut-and-fill activities, grading, removing or improving existing roadways, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. If not properly controlled, these activities would temporarily generate PM<sub>10</sub>, PM<sub>2.5</sub>, and small amounts of CO, SO<sub>2</sub>, NO<sub>x</sub>, and VOCs. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM<sub>10</sub> emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM<sub>10</sub> emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the

source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the Environmental Protection Agency (EPA) to add 1.09 tonne (1.2 tons) of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. The Department's Standard Specifications (Section 10) pertaining to dust minimization requirements requires use of water or dust palliative compounds and would reduce potential fugitive dust emissions during construction.

In addition to dust-related PM<sub>10</sub> emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO<sub>2</sub>, NO<sub>x</sub>, VOCs and some soot particulate (PM<sub>10</sub> and PM<sub>2.5</sub>) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

SO<sub>2</sub> is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Off-road diesel fuel meeting Federal Standards can contain up to 5,000 parts per million (ppm) of sulfur, whereas on-road diesel is restricted to less than 15 ppm of sulfur. However, under California law and Air Resources Board regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel, so SO<sub>2</sub>-related issues due to diesel exhaust would be minimal. Some phases of construction, particularly asphalt paving, would result in short-term odors in the immediate area of each paving site(s). Such odors would be quickly dispersed below detectable thresholds as distance from the site(s) increases.

Construction activity may generate a temporary increase in MSAT emissions. Project-level assessments that render a decision to pursue construction emission mitigation will benefit from a number of technologies and operational practices that should help lower short-term MSATs. In addition, SAFETEA-LU has emphasized a host of diesel retrofit technologies in the law's CMAQ provisions – technologies that are designed to lessen a number of MSATs.

### ***Avoidance, Minimization and/or Mitigation Measures***

The proposed project would include the Department's Standard Specifications pertaining to dust control and dust palliative. The provisions of the Department's Standard Specifications, Section 7-1/OF "Air Pollution Control" and Section 10 "Dust Control" require the contractor to comply with the Ventura County Air Pollution Control District

(VCAPCD) Rule 55 and Santa Barbara County Air Pollution Control District rules, ordinances, and regulations.

The SBCAPCD has established impact thresholds based on emissions to determine significant impacts for California Environmental Quality Act (CEQA) purposes. The threshold of significance for long-term emissions from a development project is the generation of 25 pounds per day of ozone precursors, including NO<sub>x</sub> and ROG. The SBCAPCD prepared the 2004 CAP to address violations of the AAQS. The PM<sub>10</sub> air quality benefits will result from the implementation of ozone control measures adopted in the CAP that address ozone precursors ROG and NO<sub>x</sub>, by effectively reducing the chemical reactions involving NO<sub>x</sub> in the atmosphere that result in secondary PM<sub>10</sub>.

The mitigation measures described in this section are designed to control emissions caused by project construction activities - grading, clearing, excavation, earth moving, and mobile equipment necessary to perform these activities.

#### Minimization Measures

The following measures should be included with the Resident's Engineer's (RE's) instructions. The first measure on this list is mandatory. Appropriate measures from the rest of this list, in addition to standard dust control measures found in the Caltrans Standard Specifications, should be implemented at RE's discretion to further reduce particulate emissions during construction.

- During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this should include wetting down such areas in the late morning and after work is completed for this day. Increased watering frequency should be required whenever the wind speed exceeds 15 mph. Reclaimed water should be used whenever possible.
- Minimize amount of disturbed area and reduce on-site vehicle speeds to 15 mph or less.
- Gravel pads must be installed at all access points to prevent tracking of mud onto public roads.
- If importation, exportation and stockpiling of fill material are involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be covered with a tarp from the point of origin.

- After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or re-vegetating, or spreading soil binders until the area is paved or otherwise developed so that dust generation does not occur.

#### Construction Impact Reduction – Equipment Exhaust

The following measures are recommended during project grading and construction to reduce NO<sub>x</sub> and PM<sub>2.5</sub> emissions from construction equipment.

- Only heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated "clean" diesel engines) shall be used.
- The engine size of construction equipment shall be the minimum practical size.
- The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time.
- Construction equipment shall be maintained in tune per manufacturer's specifications.
- Construction equipment operating onsite shall be equipped with two to four degree engine timing retard or pre-combustion chamber engines.
- Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
- Diesel catalytic converters, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by EPA or California shall be installed on equipment operating on-site.
- Diesel powered equipment should be replaced by electric equipment whenever feasible.
- Idling of heavy-duty diesel trucks during loading and unloading shall be limited to five minutes; auxiliary power units should be used whenever possible. State law requires drivers of diesel-fueled commercial vehicles weighing more than 10,000 pounds:
  - Shall not idle the vehicle's primary diesel engine for greater than 5 minutes at any location
  - Shall not idle a diesel-fueled auxiliary power system (APS) for more than 5 minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if you have a sleeper berth and you're within 100 feet of a restricted area (homes and schools).

- Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.

In addition, all construction vehicles shall use California Air Resources Board approved on-road diesel fuel (when locally available) to reduce emissions of carbon monoxide, reactive organic gasses, and particulate matter during construction

Measures to control fugitive dust caused by project construction are presented in the Ventura County Air Quality Assessment Guidelines (VCAQAG), Rule 55, “Fugitive Dust Control Measures and/or Dust Control Techniques.” Measures to control Valley Fever fungal spore entrainment are presented in Section 7.4.2, “Valley Fever Mitigation Measures.” Measures to control ROC and oxides of nitrogen NO<sub>x</sub> emissions from project construction are presented in Section 7.4.3, “ROC and NO<sub>x</sub> Construction Mitigation Measures.”

Since the air pollutant levels in Ventura County exceed the state and federal ozone standards and the state PM<sub>10</sub> standard, it is recommended to implement measures in Rule 55, “Fugitive Dust Control Measures and/or Dust Control Techniques and 7.4.3, “ROC and NO<sub>x</sub> Construction Mitigation Measures,” in all projects that include construction activities, with special attention given to projects that require a grading permit. If the project poses a risk for Valley Fever (see Section 6.3, “San Joaquin Valley Fever”), VCAPCD recommends that the measures in Section 7.4.2, “Valley Fever Mitigation Measures,” be included (in addition to the measures in Rule 55, “Fugitive Dust Control and/or Dust Control Techniques) to minimize Valley Fever fungal spore entrainment.

Most of the construction impacts to air quality are short-term in duration and, therefore, will not result in adverse or long-term conditions. Air quality impacts resulting from construction activities would be reduced through the implementation of the following measures (but are not limited to):

- The construction contractor shall comply with the Department’s Standard Specifications (1999) Section 7-1.01F and Section 10.

Section 7, "Legal Relations and Responsibility," addresses the contractor's responsibility on many items of concern, such as: air pollution; protection of lakes, streams, reservoirs, and other water bodies; use of pesticides; safety; sanitation; and convenience of the public; and damage or injury to any person or property as a result of any construction operation. Section 7-1.01F specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control

district and air quality management district regulations and local ordinances. Section 10 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are contained in Section 18.

- Water or dust palliative will be applied to the site and equipment as frequently as necessary to control fugitive dust emissions.
- Soil binder will be spread on any unpaved roads used for construction purposes, and all project construction parking areas.
- Trucks will be washed off as they leave the right of way as necessary to control fugitive dust emissions.
- Construction equipment and vehicles shall be properly tuned and maintained. Low-sulfur fuel shall be used in all construction equipment as provided in California Code of Regulations Title 17, Section 93114.
- Develop a dust control plan documenting sprinkling, temporary paving, speed limits, and expedited revegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
- Locate equipment and materials storage sites as far away from residential and park uses as practical. Keep construction areas clean and orderly.
- To the extent feasible, establish ESAs for sensitive air receptors within which construction activities involving extended idling of diesel equipment would be prohibited.
- Use track-out reduction measures such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic.
- Cover all transported loads of soils and wet materials prior to transport, or provide adequate freeboard (space from the top of the material to the top of the truck) to reduce PM<sub>10</sub> and deposition of particulate during transportation.
- Remove dust and mud that are deposited on paved, public roads due to construction activity and traffic to decrease particulate matter.
- To the extent feasible, route and schedule construction traffic to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- Install mulch or plant vegetation as soon as practical after grading to reduce windblown particulate in the area.

### ***Naturally Occurring Asbestos (NOA)***

While unlikely, if naturally occurring asbestos, serpentine, or ultramafic rock is discovered during grading operations Section 93105, Title 17 of the California Code of Regulations requires notification to the APCD by the next business day and implementation of the following measures within 24 hours:

- Unpaved areas subject to vehicle traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 percent asbestos;
- The speed of any vehicles and equipment traveling across unpaved areas must be no more than fifteen (15) miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust that is visible crossing the project boundaries;
- Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 percent asbestos; and
- Activities must be conducted so that no track-out from any road construction project is visible on any paved roadway open to the public.
- Equipment and operations must not cause the emission of any dust that is visible crossing the project boundaries

### **2.2.7 Noise and Vibration**

#### **Regulatory Setting**

##### ***California Environmental Quality Act***

The California Environmental Quality Act requires a strictly NO BUILD versus BUILD analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under the California Environmental Quality Act, then the act dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

##### ***National Environmental Policy Act***

The National Environmental Policy Act of 1969 and the California Environmental Quality Act provide the broad basis for analyzing and abating the effects of highway traffic noise. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between the National Environmental Policy Act and the California Environmental Quality Act.



### 23 Code of Federal Regulations 772

For highway transportation projects with Federal Highway Administration involvement, and The Department's, as assigned, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 Code of Federal Regulations 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the criterion for residences (67 decibels) is lower than the criterion for commercial areas with exterior frequent human use (72 decibels). The following table lists the noise abatement criteria for use in the National Environmental Policy Act and 23 Code of Federal Regulations 772 analysis. 23 CFR 772 requires that construction noise impacts be identified, but does not specify specific methods or abatement criteria for evaluating construction noise. However, the FHWA Roadway Construction Noise Model (Federal Highway Administration 2006) can be used to determine if construction would result in adverse construction noise impacts on land uses or activities in the project area.

The U.S. 101 HOV Lane Project under BUILD Alternatives 2 and 3 is considered to fall under the Type I Project category as defined by the Code of Federal Regulations Title 23 Part 772 (23 CFR 772). A Type I project is defined in 23 CFR 772 as follows. A proposed Federal or Federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes.

### Methodology

Noise sensitive receivers in the project area that are subject to traffic noise impacts from freeway-generated noise were identified. Noise sensitive areas typically include residences, schools, libraries, churches and temples, hospitals, recreation and sport areas, playgrounds, hotels, motels and parks as shown in Table 2.2-7 on the next page.

Sound level readings, traffic counts and pertinent field data such as traffic flow speed and topography of the locations were used to develop the computer traffic noise model for each analysis site. The computer traffic noise model was then used to predict future noise levels in order to identify traffic noise impacts and recommend soundwalls for the impacted area. Future noise levels were also considered for a design period of 20 years without the project (The NO BUILD Alternative). The computer program Traffic Noise Model (TNM 2.5) and FHWA's Traffic Noise Prediction Model (FHWA-RD-77-108)

were used in this analysis to develop the traffic noise model for both existing and design year conditions. Design year worst-hour noise levels are based on 2036 traffic volumes have been

**Table 2.2-7 Noise Abatement Criteria**

Activity Category	Noise Abatement Criteria, A-weighted Noise Level, dBA Leq(h)	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above
D	--	Undeveloped lands
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

*Source: The Department's Traffic Noise Analysis Protocol, August 2006 A-weighted decibels are adjusted to approximate the way humans perceive sound. Leq(h) is the steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual time-varying levels over one hour.*

have been determined to increase by generally 1 to 2 decibels (dBA) over the existing worst-hour noise levels for both alternatives. The future noise levels have been predicted to be in the range of 51 – 72 dBA-Leq(h).

For this project, The Department's Noise and Vibration Branch personnel performed a field survey of the entire area within the limits of the project. The survey included visiting the project sites in order to identify land uses within the project limits and to select the noise measurement sites. The entire area within the project limits was acoustically represented by 24 noise measurement site locations. Traffic noise readings were taken at 24 of the 28 site locations; the other 4 sites were modeled based on the information from the existing noise measurement at the nearest site.

The noise measurement sites were selected taking into consideration the following general site requirements:

1. Sites were acoustically representative of areas and conditions of interest. They were located at areas of human use.

2. Sites were clear of major obstructions between source and receiver. Microphone positions were more than 3 meters away from reflecting surfaces.
3. Sites were free of noise contamination by sources other than those of interest. Sites were not located near barking dogs, lawn mowers, pool pumps, air conditioners, etc.
4. Sites were not exposed to prevailing meteorological conditions that are beyond the constraints discussed in the Technical Noise Supplement.

### **Measurement of Existing Noise Levels**

Twenty short-term (20-minute) and four long-term (24-hour) noise readings were taken to determine the existing noise environment in the project area. In addition, 4 sites were modeled. 24-hour readings were taken at locations representative of residential area within an interchange in order to determine the noisiest hour. Sound level meters were placed at the representative sites and were left to run continuously monitoring and recording noise levels for a 24-hour period. The short-term noise levels were recorded within each 24-hour noise monitoring for that particular area. The noise level data collected was then analyzed and adjusted using the 24-hour noise readings to determine the noisiest hour.

Additionally, two community background noise readings were taken within the project limits. Background noise is the total of all noise generated within a community and is measured away from the freeway where freeway traffic noise does not contribute to the total noise level. Background noise levels are typically measured to determine the acoustical feasibility (noise reducibility of 5 dBA) of noise abatement and to insure that noise reduction goals can be achieved. Noise abatement cannot reduce noise levels below background noise levels.

Short-term noise readings were taken from 8/13/2007 to 8/15/2007 between the hours of 9:28 a.m. and 3:25 p.m., using Metrosonics Model MS3080 sound level meter (serial numbers 3120, 3193, and 3194) placed 5 feet above the ground on a tripod. Measurements were taken for periods of 20 minutes at each location. Long-term noise readings were taken from 8/13/2007 to 8/15/2007 between the hours of 9:00 a.m. and 2:56 p.m., using Metrosonics Model MS3080 sound level meter (serial numbers 3126 and 3127) placed 5 feet above the ground on a tripod. Measurements were taken for 24-hour or more at each location. Traffic speeds on U.S.-101 were determined by traveling in the flow of traffic and by observing the vehicle speed on the speedometer. The posted speed limit on the mainline U.S. 101 in the project area is 55 mph to 65 mph.

During the short-term measurements, the Department's staff attended the sound-level meter. All readings were recorded only if no significant sound level contamination from sources other than the freeway traffic were present. The noise levels measured during the measurement period were logged.

In accordance with *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, August 2006*, a noise impact occurs when the future noise level within the project results in a substantial increase in noise level (defined as a 12-decibel or more increase), or when the future noise level within the project approaches or exceeds the noise abatement criteria. Approaching the noise abatement criteria is defined as coming within 1 decibel of the criteria.

### **Affected Environment**

The project is built entirely on a coastal terrace adjoining the Pacific Ocean. The project is bordered to the east by coastal bluffs with heights up to about 600 feet. The ocean is to the west of the project for the entire length of the project. Noise-sensitive receptors within the project area include single-family residential areas, commercial areas, a hotel, a park, public beaches, and undeveloped lands to be developed in the future. There are no existing soundwalls. According to Federal Highway Administration Noise Abatement Criteria, the noise abatement criteria for the exterior of residential areas is 67 decibels. See Figure 2.2-1 for typical noise levels.

### **Land Use and Sensitive Areas**

The existing land use within the project limits is comprised of residential, commercial, park, land to be developed, and hotel/motel. There is one park located on the southwest corner of U.S. 101 and Bailard Avenue. There are many commercial developments within the project limits, but none with exterior frequent human use as defined in the Protocol.

Figure 2.2-1 on the next page lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise-levels discussed in this section with common activities.

### **Existing Traffic Noise**

The noise environment in the project area is dominated by traffic traveling the State U.S. 101. There are no existing soundwalls within the project limits. Tables 2.2-8 and 2.2-9 summarize short-term sound level measurements taken in the project area and the noise modeling results for existing conditions. The measurements and modeling results indicate

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night, Concert Hall (Background)
	10	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Figure 2.2-1 Typical Noise Levels decibels (dBA)

**Table 2.2-8 Noise Measurements and Modeling results (Northbound)**

Receiver	Direction	Location	Existing Worst-Hour Noise Level dBA – Leq [h]	Future NO BUILD Noise Levels dBA – Leq [h] Alt. 1	Future Worst-Hour Noise Level dBA – Leq [h] “MINIMUM BUILD”	Impact Type N=No Impact A=Approaches E=Exceeds	Future Worst-Hour Noise Level dBA – Leq [4] FULL BUILD	Impact Type N=No Impact A=Approaches E=Exceeds
Site #B	Northbound	6726 Ojai Avenue	67.2	68.9	70.2	E	70.2	E
Site #BM1		Modeled Site	-	65.8	67.1	E	67.1	E
Site #BM2		Modeled Site	-	63.7	65.1	N	65.1	N
Site #B1		6832 Zelzah Avenue	67.3	68.2	69.8	E	69.8	E
Site #B2		6953 W. Surfside Street	69.1	69.9	71.5	E	71.5	E
Site #B3		7003 W. Surfside Street	66.4	67.4	69.3	E	69.3	E
Site #B4		7128 Carpinteria Avenue	65.4	66.3	68.4	E	68.4	E
Site #B4M1		Modeled Site	-	63.3	65.2	N	65.2	N
Site #B4M2		Modeled Site	-	61.9	63.7	N	63.7	N
Site #C4		6550 Calle Garreta	56.4	58.2	58.6	N	58.6	N
Site #D		6180 Via Real SP 123	63.7	66.5	65.6	A	65.6	A
Site #D1		6180 Via Real SP118	66.5	67.4	67.2	E	67.2	E
Site #D2		1015 Via Real #A	66.8	68.0	68.2	E	68.2	E
Site #D3		1010 Via Real #B	63.9	65.2	65.3	N	65.3	N
Site #D4		5946 Via Real	61.0	61.2	61.2	N	61.2	N
Site #D5		5926 Via Real	67.2	67.2	67.8	E	67.8	E
Site #D6		5910 Via Real	69.4	69.4	70.9	E	70.9	E

Source The Department's Noise Study Report 2007

**Table 2.2-9 Noise Measurements and Modeling results (Southbound)**

Receiver	Direction	Location	Existing Worst-Hour Noise Level dBA – Leq [h]	Future No BUILD Noise Levels dBA – Leq [h] Alt. 1	Future Worst-Hour Noise Level dBA – Leq [h] “MINIMUM BUILD”	Impact Type N=No Impact A=Approach E=Exceeds	Future Worst-Hour Noise Level dBA – Leq [4] FULL BUILD”	Impact Type N=No Impact A=Approach E=Exceeds
Site #A	Southbound	6711 Breakers Way	63.5	66.3	65.4	N	65.4	N
Site #A1		6614 Old PCH	64.9	67.8	67.2	E	67.2	E
Site #A2		6666 Old PCH	65.3	67.3	66.5	E	66.5	E
Site #A3		6292 Ocean Ave	65.2	66.4	65.8	A	65.8	A
Site #A4		6762 Breakers Way	66.2	68.0	67.4	E	67.4	E
Site #A5		6776 Breakers Way	66.0	67.8	67.1	E	67.1	E
Site #C		8050 Puesta Del Sol	62.0	62.2	62.6	N	62.6	N
Site #C1		8068 Puesta Del Sol	56.8	59.2	59.0	N	59.0	N
Site #C2		8107 Buena Fortuna St.	49.0	51.2	51.6	N	51.6	N
Site #C3		#2 Rincon Point Lane	51.8	51.8	51.8	N	51.8	N
Site #D7		Park @ Bailard Street	56.2	56.2	56.8	N	56.8	N

Source The Department's Noise Study report 2007

that existing traffic noise levels for the residential area typically range between 48.0 and 68.3 dBA-Leq(h). The 24-hour noise readings were taken at Sites #A through #D (4 total). For Mussel Shoals community (Site #A), the existing worst-hour noise level was measured to be 63.5 dBA-Leq(h) between 7:19 a.m. and 8:19 a.m. in the morning. The noisiest hour for La Conchita (Site #B) was determined to be 67.2 dBA-Leq(h) between the hours of 5:04 a.m. and 6:04 a.m. For Rincon Point community (Site #C), the existing worst-hour noise level was measured to be 62.0 dBA-Leq(h) between the hours of 3:07 p.m. and 4:07 p.m. The noisiest hour in the City of Carpinteria between Rincon Road and Bailard Avenue occurred between 8:17 a.m. and 9:17 a.m., the existing worst-hour noise level being 62.7 dBA-Leq(h). Background noise levels measured at two locations and



ranged from 50.0 to 51.0 dBA-Leq(h). The noise measurement and analyses locations are shown on the aerial photographs in Appendix F for both viable BUILD alternatives.

The traffic noise analysis indicates that the residential areas in Mussel Shoals, La Conchita, and City of Carpinteria within the project area will be impacted after project completion under all alternatives [i.e. the noise level will approach or exceed FHWA Noise Abatement Criteria (NAC)]. Since traffic noise impacts have been identified, noise abatement has been considered for the impacted receivers. As stated in 23 CFR 772 and in the Department's Protocol, noise abatement has only been considered where noise impacts are predicted and where frequent human use occurs and where a lowered noise level would be of benefit. For all impacted receptors, noise abatement has been evaluated for preliminary acoustical feasibility (noise reduction of 5 dBA or more) and reasonableness (cost effective).

## **Environmental Consequences**

### ***NO BUILD Alternative***

Under the NO BUILD Alternative, existing conditions would remain and no impacts to noise or vibration due to construction would occur.

### ***BUILD Alternatives***

Existing noise levels were recorded at 24 locations and modeled at 4 locations that represented the noise sensitive areas along U.S. 101 in Ventura and Santa Barbara Counties within the project limits. The existing noise levels recorded at various residences/park ranged between 48 and 68 dBA-Leq(h). Soundwalls have been recommended along the northbound and southbound sides of the U.S. 101 freeway. It must be noted that the proposed location, length, noise reduction, and number of benefited residences of each soundwall are the same for both BUILD alternatives. Calculations based on preliminary design data indicate that the recommended barriers would reduce future noise levels from 5 to 9 decibels (dBA) for approximately 136 residences under BUILD alternatives. The total reasonable cost allowance for the recommended soundwalls is \$7,048,000 for both BUILD alternatives. The total length of the recommended barriers for both BUILD alternatives is 7,514 feet and minimum heights would be 10 or 12 feet depending on location. If, during the final design, conditions have changed substantially, then the recommended noise abatement measures in this report may also change. The final decision for noise barrier construction will be made upon completion of the project design and the public involvement process.

The locations where predicted traffic noise levels approach/exceed the Noise Abatement Criteria of 67 dBA-Leq(h) were recorded for Activity Category B. The Activity Category

B land uses within the project limits under consideration include residential properties. It was predicted that the future carpool lane project along U.S. 101 would impact many of the residential areas adjacent to the freeway within the project limits. Proposed soundwall locations are shown in Appendix F.

### **Residential Areas**

All impacted residential areas have been considered for noise abatement. They are represented by Sites #A1 thru #A5 in Mussel Shoals, Sites #B thru #B4 in La Conchita, and Sites #D, D1, D2, D5, and D6 in the City of Carpinteria.

### **Hotels/Motels**

The Cliffhouse Inn located in Mussel Shoals is represented by field reading Site #A1.

### **Parks**

There is one park/recreational area located at Bailard Avenue within the project limits. No traffic noise impacts at the future predicted noise level of 66 dBA-Leq (h) or above has been predicted at this park. Based on predicted noise levels, freeway traffic noise impact has not been predicted to occur at the park located on the southwest corner of U.S. 101 and Bailard Avenue.

### **Commercial Developments**

There are no commercial developments with exterior frequent human use.

### **Undeveloped Lands**

There are two undeveloped land parcels that will be developed in the future. At 6380 Via Real, 37 single-family units have been proposed for construction. At the “Bluffs 3”, King Resorts with 213 hotel rooms has been proposed for construction.

The residential areas of Mussel Shoals, La Conchita, and the City of Carpinteria qualified for noise abatement consideration as part of a Type I project. Therefore, various heights of acoustically feasible soundwalls have been provided as noise abatement measure for both BUILD alternatives. Proposed soundwalls SW 101 and SW 102 in Mussel Shoals benefit approximately 43 residences; SW 103 and SW 104 in La Conchita benefit 44 residences. In the City of Carpinteria, proposed soundwalls SW 105, SW 106, SW 107, SW 108 provide noise reduction to 31 and 18 residences.

### **Proposed Acoustically Feasible Soundwalls For BUILD Alternatives:**

In the community of Mussel Shoals, a minimum of two 10-foot tall soundwalls were determined to provide at least a 5 dBA noise reduction for the areas represented by sites A-1 through A-5 (43 residences in Mussel Shoals) (see Table 2.2-10 and Appendix F).

The proposed barriers would be constructed along the shoulder of the highway. Proposed Soundwall #101 would partially obstruct the view of the Cliff House Inn from the U.S. 101. Therefore, the views of the affected property owners (i.e. the owners of impacted residences represented by Site #A1 and commercial property owner) must be considered before making a final noise abatement decision. Community members have expressed the desire for SW101; however, every effort would be made to improve visibility of the Cliff House Inn from the U.S.101.

**Table 2.2-10 Proposed Soundwalls for BUILD Alternatives (Mussel Shoals)**

Mussel Shoals Receptor # and Location	Predicted 2036 worst hour Noise Level dBA Leq(h)	Soundwall Number(s)	Predicted 2036 Noise level with 10- foot soundwall dBA Leq(h)	Predicted 2036 Noise Reduction (minimum 5- dBA Leq(h))
A1-6614 Old PCH	67	101+102	65	-
A2- 6666 Old PCH	67	101 + 102	61	6
A3 – 6292 Ocean Ave	66	102	60	6
A-4 6762 Breakers Way	67	102	61	6
A-5 6776 Breakers Way	67	102	62	5

*The Department's Noise Study Report 12/24/07 Table 4*

In La Conchita, a minimum of two 12-foot tall soundwalls built along the edge of the shoulder were determined to provide at least a 5 dBA reduction in noise for the areas represented by B-B4 (44 residences in La Conchita) (see Table 2.2-11 or Appendix F). These proposed soundwalls would block the residents' view of the Pacific Ocean. Community members have expressed they would not want the soundwall constructed.

**Table 2.2-11 Proposed Soundwalls for BUILD Alternatives (La Conchita)**

La Conchita Receptor # and Location	Predicted 2030 worst hour Noise Level dBA Leq(h)	Soundwall Number(s)	Predicted sound level12 foot Soundwall dBA Leq(h)	Predicted Noise Reduction (minimum 5- dBA Leq(h))
B - 6726 Ojai Avenue	70	103+104	63	7
BM1 – Modeled site	67	103+104	61	6
B1- 6832 Zelzah Ave	70	103+104	65	5
B2 – 6953 W. Surfside Street	72	104	64	8
B3 – 7003 w. Surfside Street	69	104	62	7
B4 – 7128 Carpinteria Avenue	68	104	62	6

*The Department's Noise Study Report 12/24/07 Table 4*

In Carpinteria, a minimum of four 12-foot tall soundwalls (two along the edge of shoulder and two along state right-of-way) have been proposed to provide at least a 5 dBA reduction in noise for the areas represented by D to D6 (see Table 2.2-12 or Appendix F). Community members along Via Real have expressed their opinion that the

Department would make every effort to survey the property owners to determine their desire for a soundwall or not. They do not want their views blocked, but want noise abated.

**Table 2.2-12 Proposed Soundwalls for BUILD Alternatives (Carpinteria)**

Carpinteria Receptor # and Location	Predicted 2030 worst hour Noise Level dBA Leq(h)	Soundwall Number(s)	Predicted sound level with 12 ft. soundwall dBA Leq(h)	Predicted Noise Reduction (minimum 5- dBA Leq(h))
D – 6180 Via Real SP123	66	105 + 106	61	<b>5</b>
D1 – 6180 Via Real SP118	67	105 + 106	61	<b>6</b>
D2-1015 Via Real #A	68	105 + 106	62	<b>6</b>
D5 – 5926 Via Real	68	107 + 108	62	<b>6</b>
D6-5910 Via Real	71	107 + 108	63	<b>8</b>

*The Department's Supplemental Traffic Noise Study Report 04/15/08 Table 4 and 5 (revised)*

The determination of whether or not the proposed barriers are reasonable to construct is made in the Noise Abatement Decision Report (NADR) prepared by the Project Design Department, and included as part of the draft and final environmental documents.

Calculations based on preliminary design data indicate that the proposed noise barriers will reduce noise levels by 5 dBA to 9 dBA for approximately 136 residences at a total reasonable cost allowance of \$7,048,000 for the U.S. 101 HOV Project under BUILD alternatives. This total reasonable cost allowance of \$7,048,000 is below half of the total project cost for BUILD alternatives (\$49,000,000 for MINIMUM BUILD Alternative and \$57,500,000 for FULL BUILD Alternative) and therefore, as per TNAP guidelines, it was determined that no modification in reasonable allowance was necessary.

### **CONSTRUCTION NOISE**

During the construction phases of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction noise is regulated by the Department's standard specifications, Section 7-1.01I, Sound Control Requirements. These requirements state that noise levels generated during construction shall comply with applicable local, state, and federal regulations.

Equipment involved in construction is expected to generate noise levels ranging from 70 to 90 dBA at a distance of 50 feet. Noise produced by construction equipment would be reduced over distance at a rate of about 6 dBA per doubling of distance. Normally, construction noise levels should not exceed 86 dBA (Lmax) at a distance of 50 feet.

## **Avoidance, Minimization and/or Mitigation Measures**

### ***California Environmental Quality Act***

Because there are no significant impacts under CEQA, there are no mitigation measures under CEQA. Only acoustically feasible and reasonable noise barriers would be recommended to reduce noise impacts to less than significant, and landscape treatments would be used to minimize visual impacts to less than significant.

### ***National Environmental Policy Act***

Based on the Traffic Noise Study Report dated 12/24/07, the Department intends to incorporate noise abatement measures for the proposed project in the form of soundwalls on the edge of shoulder and state right of way in order to attenuate traffic noise in the impacted areas of Mussel Shoals, La Conchita and the City of Carpinteria. The total barrier length would be 7,514 feet long and a minimum of 10 feet in height (Mussel Shoals) and a minimum 12 feet in height (La Conchita and City of Carpinteria). Calculations based on preliminary design data indicate that the barrier(s) would reduce noise levels by five to nine decibels for 136 residences at a cost of \$7,048,000.

### **Avoidance Measure**

The final decision of the noise abatement would be made upon completion of the project design and the public involvement processes. The decision on noise abatement measures is made by the Department, considering the results of the reasonableness determination and information collected during the public input process. The opinions of the affected property owners are considered in reaching a final decision on the noise abatement measures to be provided. Noise abatement within the State right-of-way would not be provided if more than 50% of the affected property owners do not want it.

### **Operational Abatement Measures**

Construction noise impacts are regulated by the Department's standard specifications, Section 7-1.011, Sound Control Requirements. These requirements state that noise levels generated during construction shall comply with applicable local, state, and federal rules, regulations and ordinances. In addition, the Standard Specifications require that all contractors equipment operating on the job site be equipped with mufflers that are recommended by the manufacturer of the vehicle.

The Department's Special Provision 300 states that "The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 dbA at a distance of 45 feet. This requirement shall not relieve the Contractor from responsibility for complying with local ordinances regulating noise level.

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with the Department's standard specifications and would be short-term, intermittent, and dominated by local traffic noise. Implementing the following measures would minimize temporary construction noise impacts:

- Equipment Noise Control should be applied to revising old equipment and designing new equipment to meet specified noise levels.
- In-Use Noise Control where existing equipment is not permitted to produce noise levels in excess of specified limits.
- Site restrictions is an attempt to achieve noise reduction through modifying the time, place, or method of operation of a particular source.
- Personal training of operators and supervisors is needed to become more aware of the construction site noise problem, and are given instruction on methods that they can implement to improve conditions in the local community.

## **2.3 BIOLOGICAL ENVIRONMENT**

### **2.3.1 Wetlands and Other Waters**

#### **Regulatory Setting**

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 United States Code 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers with oversight by the Environmental Protection Agency.

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, and the Department as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Game and the Regional Water Quality Control Boards. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that would substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Game before beginning construction. If the California Department of Fish and Game determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement would be required. The California Department of Fish and Game's jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the Department of Fish and Game.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The Regional Water Quality Control Boards also issue water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

### **Affected Environment**

There are drainages with existing culverts near Mussel Shoals, La Conchita and Tank Farm that cross under the highway and drain into the Pacific Ocean.

### **Environmental Consequences**

Under the NO BUILD alternative, existing conditions would remain and no impacts to wetlands or other waters would occur.

The MINIMUM BUILD alternative would not impact the drainage culverts, so no impacts to wetlands or other waters would occur.



The FULL BUILD alternative would involve culvert extensions of which six are considered jurisdictional under the Clean Water Act and the California Department of Fish and Game Code. These culverts are located between Mussel Shoals and Tank Farm.

### **Avoidance, Minimization and/or Mitigation Measures**

The six jurisdictional drainages with culvert extensions associated with the FULL BUILD Alternative would require work to be done during the dry season (April 1 through October 31) and would have both permanent and temporary impacts to jurisdictional waters of the U.S. This work would require permits under sections 404 and 401 of the Clean Water Act from the U.S. Army Corps of Engineers and the Regional Water Quality Control Board and a Streambed Alteration Agreement under Section 1601 of the California Department of Fish and Game Code 1600 (et seq.). The project would also require a coastal development permit.

### **2.3.2 Plant Species**

#### **Regulatory Setting**

The U.S. Fish and Wildlife Service and California Department of Fish and Game share regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act and/or the California Endangered Species Act. Please see the Threatened and Endangered Species, Section 2.3.5, in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including California Department of Fish and Game fully protected species and species of special concern, U.S. Fish and Wildlife Service candidate species, and non-listed California Native Plant Society rare and endangered plants.

The regulatory requirements for the Federal Endangered Species Act can be found at United States Code 16, Section 1531, et. seq. See also 50 Code of Federal Regulations Part 402. The regulatory requirements for the California Endangered Species Act can be found at California Fish and Game Code, Section 2050, et. seq. The Department’s projects are also subject to the Native Plant Protection Act, found at Fish and Game

Code, Sections 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100-21177.

A Natural Environmental Study for this project was completed by The Department's Division of Central Coast Environmental Management on 11/21/07. Study methods utilized by the Department included site visits, focused botanical surveys, a review of past projects in the area, a search of the California Natural Diversity Database, and obtaining a species list of Federal endangered and threatened species from the U.S. Fish and Wildlife Service. The focused botanical surveys for potential listed plant species occurred during the appropriate times of the year. The site visits included an evaluation of drainages with culverts in order to determine jurisdictional status in relation to the Clean Water Act and the California Department of Fish and Game code. The Biological Study Area (BSA) was determined based on the limits of disturbance required for construction activities and species dispersal and distribution patterns.

### **Affected Environment**

The project is located in coastal Southern California and covers a distance of 6 miles just west of Mobil Pier Undercrossing (PM 39.8) in Ventura County to 2.2 miles into the City of Carpinteria in Santa Barbara County along the U.S. 101. The project is located adjacent to the coast in an area where the Santa Ynez Mountain range abuts the Pacific Ocean. The majority of the disturbance associated with this project will take place within the existing actively maintained highway median and within state right of way. The highway median consists of a combination of ruderal and landscaping vegetation.

Within the community of La Conchita, a pedestrian under crossing (PUC) is proposed to connect the public with the beach along the Pacific Ocean. Environmental Studies for the PUC were completed and analyzed in the Mussel Shoals/La Conchita Access Improvement Project Mitigated Negative Declaration/Findings of No Significant Impact dated June 2002.

Adjacent to the community of Mussel Shoals (ocean side of the U.S. 101) between the Ocean Avenue Interchange and the southern limits of the project, the limit of widening will be within the state right of way. Within this area, the Pacific Ocean is adjacent to the U.S. 101 in the southwest direction. Between the ocean and the U.S. 101 there is a small strip of native and non-native ruderal vegetation above the riprap that runs the length of the beach within this section of the project. On the inland side of the U.S. 101 between the community of La Conchita and the southern limits of this project, ruderal vegetation exists along a narrow strip of land that abuts the railroad right of way and the highway.

## Environmental Consequences

Focused botanical surveys on 3/27/07, 5/29/07, 8/7/07 and 10/25/07 confirmed that sensitive plant species do not occur within or directly adjacent to the area of impact; therefore there would be no impacts to sensitive plant species as a result of the BUILD alternatives. The majority of project disturbance would occur within the existing median that is characterized as ruderal vegetation with a few landscape plantings of *Myoporum laetum*. Vegetation within and adjacent to the project limits consists of the following species:

- Radish (*Raphanus sativus*)
- Pearly everlasting (*Anaphalis margaritacea*)
- Ripgut brome (*bromus diandrus*)
- Fennel (*Foeniculum vulgare*)
- Bristly ox-tongue (*Picris echioides*)
- Coyote bush (*Baccharis pilularis*)
- Ice plant (*Carpobrotus chilensis*)
- Bindweed (*Convolvulus sp.*)
- Bermuda butter cup (*Oxalis pes-caprae*)
- Cheeseweed (*Malva parviflora*)
- Filaree (*Erodium sp.*)
- Kikuyu grass (*Pennisetum clandestinum*)
- Fountain grass (*Pennisetum setaceum*)
- Tree tobacco (*Nicotiana glauca*)
- Saltbush (*Atriplex lentiformis*)
- Red brome (*Bromus madritensis ssp. Rubens*)
- Burclover (*Medicago sp.*)
- Plantain (*Plantago lanceolata*)
- Bermuda grass (*Cynodon dactylon*)
- Lemonade berry (*Rhus integrifolia*)
- Giant rye grass (*Leymus condensatus*)
- Rice grass (*Piptatherum miliaceum*)
- Foxtail (*Hordeum murinum*)
- Garden nasturtium (*Tropaeolum*)
- Castor bean (*Ricinus communis*)
- Oats (*Avena sp.*)

## Avoidance, Minimization and/or Mitigation Measures

Avoidance and minimization measures for this project include the establishment and use of Environmentally Sensitive Area (ESA) fencing. The ESA limits will be shown on the final plan sheets. Prior to construction the Resident Engineer shall contact the Department's District 7 Construction Liaison or appropriate Environmental Planning staff in order to set up the ESA limits in the field.

### **2.3.3 Animal Species**

#### **Regulatory Setting**

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service, the National Oceanographic and Atmospheric Fisheries Service, and the California Department of Fish and Game are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or Federal Endangered Species Act. All other special-status animal species are discussed here, including California Department of Fish and Game fully protected species and species of special concern, and the U.S. Fish and Wildlife Service or National Oceanographic and Atmospheric Fisheries Service candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act
- Marine Mammal Protection Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1601 – 1603 of the Fish and Game Code
- Sections 4150 and 4152 of the Fish and Game Code

For projects within the Coastal Zone, consult the regulations and policies of either the Coastal Commission or the Bay Conservation and Development Commission, as applicable.

#### **Affected Environment**

Areas within the project limits are generally disturbed and provide poor quality habitat for wildlife. Species observed during field reviews include western fence lizards (*Sceloporus occidentalis*), western gulls (*Larus occidentalis*) and California gulls (*Larus californicus*).

## Environmental Consequences

The BUILD alternatives would not impact any federal or state listed species or any other sensitive animal species.

## Avoidance, Minimization and/or Mitigation Measures

Avoidance and minimization measures for this project include the establishment and use of Environmentally Sensitive Area (ESA) fencing. The ESA limits will be shown on the final plan sheets. Prior to construction the Resident Engineer shall contact District 7 Construction Liaison or appropriate Environmental Planning staff in order to set up the ESA limits in the field.

### 2.3.4 Invasive Species

#### Regulatory Setting

On February 3, 1999, President Bill Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem, whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration guidance issued August 10, 1999 directs the use of the state’s noxious weed list to define the invasive plants that must be considered as part of the National Environmental Policy Act analysis for a proposed project.

#### Affected Environment

The following plant species were found within the project limits and are on the California Invasive Plant Council List of Invasive species.

- Radish (*Raparus sativus*)
- Ripgut brome (*bromus diandrus*)
- Fennel (*Foeniculum vulgare*)
- Bristly ox-tongue (*Picris echioides*)
- Bindweed (*Convolvulus sp.*)
- Bermuda butter cup (*Oxalis pes-capre*)
- Filaree (*Erodium sp.*)
- Kikuyu grass (*Pennisetum clandestinum*)
- Fountain grass (*Pennisetum seetaceum*)
- Tree tobacco (*Nicotiana glauca*)
- Red brome (*Bromus madritensis ssp. Rubens*)
- Burclover (*Medicago sp.*)
- Plantain (*Plantago lanceolata*)
- Bermuda grass (*Cynodon dactylon*)

- Rice grass (*Piptatherum miliaceum*)
- Foxtail (*Hordeum murinum*)
- Castor bean (*Ricinus communis*)

### **Environmental Consequences**

There would be no impacts because none of the affected species on the California list of Noxious Weeds is currently used by the Department for erosion control or landscaping in Ventura or Santa Barbara County.

### **Avoidance, Minimization and/or Mitigation Measures**

To avoid and minimize the spread of invasive weeds, the invasive species removed during construction activity and would not be replanted as part of highway landscaping. Care shall be taken to avoid including any species that occur on the California Invasive Plant Council's Invasive Plant inventory in the Department's erosion control seed mix or landscaping plans for the project. In compliance with the Executive Order on Invasive Species, Executive Order 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions would be taken if invasive species were found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

## **2.4 Cumulative Impacts**

### **Regulatory Setting**

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative impact assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

CEQA Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts, under NEPA, can be found in 40 CFR, Section 1508.7 of the CEQ Regulations

### ***Project Specific Resources Considered in the Cumulative Impact Analysis***

A cumulative impact analysis is required whenever an environmental document is prepared (i.e., an Environmental Assessment (EA), Environmental Impact Statement

(EIS), or an Environmental Impact Report (EIR)). The purpose of a cumulative impact analysis is to analyze the potential incremental environmental impacts associated with a project in conjunction with past, present, and reasonably foreseeable future projects.

Based upon the analysis in this IS/EA regarding the potential for the proposed project to result in direct and/or indirect impacts to certain resources, the following environmental issues have been identified for consideration in the cumulative impact analysis:

- Aesthetics and Visual Resources
- Air Quality
- Noise
- Traffic and Transportation (bicycle/pedestrian facilities)

### **Affected Environment**

#### ***Resource Study Areas***

This section discusses the resource study area (RSA) defined for each of the resource areas to discuss cumulative impacts. Each RSA is delineated to include the project area as well as areas outside of the project area where the proposed project activities, in combination with activities in the other areas, could contribute to cumulative impacts on common resources.

#### **Aesthetics/Visual Resources**

The RSA for aesthetic and visual resources includes views of and from the proposed project area, which is primarily defined by the U.S. 101 corridor. Within the project area, U.S. 101 is bound by the Pacific Ocean to the west and the Santa Ynez Mountains to the east. Views of the Pacific Ocean dominate the western viewshed of the project alignment and are highly valued by residents in several coastal communities near the proposed project. Communities located in the viewshed of the project area include Mussel Shoals, La Conchita, Rincon, and southern portions of the City of Carpinteria. Projects located within the viewshed that could potentially impact views in the area, in particular the views of the Pacific Ocean, would contribute to cumulative visual impacts.

#### **Air Quality**

The RSA for air quality includes Santa Barbara County and Ventura County, both of which are located within the South Central Coast Air Basin (Basin) along with San Luis Obispo County. The primary agencies responsible for regulations to improve air quality in the Basin are the Ventura County Air Pollution Control District (VCAPCD), Santa Barbara County Air Pollution Control District (SDBAPCD), and the California Air



Resources Board (CARB). Additionally, the SCAG and SBCAG work closely with VCAPCD and SBCAPCD to determine how anticipated future growth and vehicular travel in the Basin would affect air quality planning and analysis. Projects within the Basin that could potentially affect air quality in the Basin would contribute to cumulative air quality impacts.

### **Noise**

The RSA for noise includes communities and other public spaces within and near the project area where sensitive noise receptors may be located. Existing sensitive noise receptors in the vicinity include bikeways, single family residences, a hotel, park space, and land which is currently vacant but under consideration for future development. Projects that could result in either temporary or permanent increases in noise levels within these areas would contribute to cumulative noise impacts.

### **Traffic and Transportation**

The RSA for traffic and transportation includes transportation facilities within the project area as well as regional transportation systems. Projects planned for the facilities within the project vicinity, as well as projects throughout Santa Barbara County and Ventura County, with the potential to impact traffic and transportation facilities, would contribute to cumulative traffic and transportation impacts.

### **Historical Context**

This section discusses the existing setting and condition of each of the RSA areas, and acts as a baseline for determining which project impacts would contribute to cumulative impacts.

### **Aesthetics/Visual Resources**

The natural visual resources within the RSA consist of the Pacific Ocean, coastal bluffs, hillsides, relatively varied topography, exposed geological formations, and mostly ruderal and landscaping vegetation. High quality views of resources are available from public locations along U.S. 101, nearby beaches, and communities. Common views in the region include dramatic vistas of coastal bluffs and hillsides to the northeast of U.S. 101 and Pacific Ocean views to the southwest of U.S. 101. There are also several residential communities located on both sides of U.S. 101 including Mussel Shoals, La Conchita, and Rincon Point, which are small residential enclaves along the highway and the City of Carpinteria. Other developments along the coast include public campgrounds/open space uses, oil and gas support facilities, and some commercial, industrial, and agricultural uses in Carpinteria. The overall character of the region is relatively rural and agricultural.

### *Air Quality*

Ventura County is designated as an attainment area for the federal NO<sub>2</sub>, PM<sub>2.5</sub>, PM<sub>10</sub>, and CO standards. However, it is designated as non-attainment for eight-hour ozone federal standards. The major sources of ozone precursor emissions in Ventura County are motor vehicles and solvent usage (paints, consumer products, and certain industrial processes). Ventura County is designated as attainment for the state CO and NO<sub>2</sub> standards, but non-attainment for state one- and eight-hour ozone, particulate matter less than ten microns in diameter (PM<sub>10</sub>), and particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>) standards. Sources of PM<sub>10</sub> include mineral quarries, grading, demolition, agricultural tilling, road dust, and vehicle exhaust. In 2004, the VCAPCD adopted the Ozone Air Quality Management Plan (AQMP) to comply with the FCAA and create a plan to achieve NAAQS.

Santa Barbara County is designated as attainment for all federal standards for criteria pollutants. However, Santa Barbara County does not meet the state standards for 8-hour ozone and PM<sub>10</sub>. Similar to Ventura County, sources of ozone in Santa Barbara County include motor vehicles, the petroleum industry, and solvent usage, and sources of PM<sub>10</sub> include mineral quarries, grading, demolition, agricultural tilling, road dust, and vehicle exhaust. Air quality in Santa Barbara County continues to improve and the number of unhealthy air quality days in Santa Barbara County has been reduced by more than 95 percent from 1988 to 2004 despite substantial increases in population and vehicle miles traveled. However, it will be several years before the County can meet the state standards for ozone and PM<sub>10</sub>.

### *Noise*

Noise sources within the RSA are dominated by traffic along U.S. 101 and within the existing communities. As development increases and traffic levels become higher, noise levels along the transportation facilities also increase within the corridor and in adjacent communities. Currently, there are no soundwalls within the project area.

### *Traffic and Transportation*

U.S. 101 is an important north-south route within the project area and the region as a whole. Existing traffic levels are currently overwhelming the capacity of the U.S.101 during peak periods and on weekends. Based upon regional growth studies, the populations in Ventura County and Santa Barbara County are expected to increase through the year 2025, which will add additional pressure to existing conditions.

Long distance commuting is escalating as affordable housing is located farther away from the employment centers; resulting in an increase in the number of people commuting

from Ventura County to Santa Barbara County. In addition, the weekends and summer months, the coastal location, natural amenities, and temperate weather have made this area a popular tourist destination, resulting in temporary traffic increases.

The U.S. 101 corridor in the study area has a bikeway in both directions, which acts as an important part of the regional bikeway systems. Cycling is a popular recreational sport in Southern California, and there are a number of local and regional cycling groups and advocates that promote the maintenance and expansion of bicycle routes in the area. The area is also a popular beach spot, and there are a number of public beaches within the region. In particular, a number of pedestrians travel between the community of La Conchita and the beach via a drainage culvert under U.S. 101.

### ***Future Actions or Projects***

#### ***Summary of Cumulative Projects***

The following Table 2.4-1 summarizes the cumulative projects considered for this cumulative impacts analysis, as well as the potential environmental impacts associated with each project. Projects which are considered relevant for this cumulative impacts analysis include transportation and non-transportation projects in the vicinity of the proposed project. This includes projects in Ventura County, Santa Barbara County, and the City of Carpinteria. Non-transportation projects include residential, mixed-use, and hotel projects in the City of Carpinteria and the City of Santa Barbara which would likely be constructed at the same time or contribute traffic to the project alignment during project construction. These projects are within approximately eight miles north of the northern terminus of the proposed project.

Transportation projects include projects on the U.S. 101 in Ventura and Santa Barbara Counties which would be constructed or finished within approximately five years of the beginning of construction of the proposed project. These transportation projects are considered for their likelihood to impact traffic along the U.S. 101 in Ventura and Santa Barbara Counties. Other projects are proposed in the vicinity of the proposed project; however, those projects are not anticipated to contribute substantially to issue areas considered for cumulative impacts associated with the proposed project (i.e., air quality, hydrology, traffic, etc). The following list of cumulative projects was compiled with information in conjunction with The Department's, the City of Carpinteria Community Development Department, the Ventura County Planning Department website, and the Santa Barbara County Planning Department website.

**Table 2.4-1 Cumulative Projects and Impacts**

Project	Description	Address	Environmental Impacts	Project Status*
<b>City of Carpinteria</b>				
BEGA Warehouse	This project includes the construction of a 40,000 sq. ft. warehouse.	1000 Bega Way	Traffic, Air Quality, Noise, Hazardous Materials	D
Green Heron Spring	This approved project proposes the demolition of the existing building on-site and the construction of 30 new condominiums.	1300 & 1326 Cravens Lane	Traffic, Air Quality, Historical Resources	P
Lagunitas Mixed Use Development	The proposed mixed-use project consists of 85,000 office space as well as 73 residential units (37 single-family and 36 attached three-plex units)	6380 Via Real	Traffic, Air Quality	C
Lavender Court	This approved mixed-use development will include 40 condominiums, five of which will be affordable, and 4,672 sq. ft. of commercial space.	4646 Carpinteria Avenue	Traffic, Air Quality	B
Mission Terrace	The City has approved the construction of a 27-unit housing project that includes 24 single-family market rate units and three affordable single-family units.	1497 Linden Avenue	Traffic, Air Quality	C
Venoco's Paredon Project	The City recently received an application from Venoco requesting to expand its facility through the establishment of an on-shore directional drilling operation. The project is in its initial stage of submittal to the City.	5731 Carpinteria Avenue	Traffic, Air Quality, Water Quality, Biology, Geotechnical,	P
<b>Santa Barbara County</b>				
SB U.S. 101 Operational Improvements Milpas Street to Hot Springs Project	This project proposes 2.0 miles of improvements in the City of Santa Barbara. Improvements include additional northbound (NB) and southbound (SB) lanes, local road improvements, and bicycle and pedestrian enhancements.	U.S. 101 between Cabrillo Road and Milpas Street	Traffic, Noise, Air Quality, Water Quality, Biology, Community Impacts, Visual Impacts, Hazardous Waste, Wetlands	PP
SB U.S. 101 HOV South Coast Project	This 10.3 mile project proposes to add median HOV lanes on the U.S. 101 NB and SB from the City of Carpinteria to the City of Santa Barbara. Public circulation of a draft environmental document is expected in Spring 2011.	U.S. 101 from 0.4 miles north of Bailard Road in the City of Carpinteria to 0.5 miles south of Milpas Street in the City of Santa Barbara	Traffic, Noise, Air Quality, Water Quality, Biology, Community Impacts, Visual Impacts, Hazardous Waste, Wetlands	PP
SB U.S. 101 Linden to Casitas Pass Interchanges Project	This 1.1 mile project includes reconstruction of interchanges, replacement of Carpinteria Creek Bridge, and new Via Real connection south to Bailard Avenue. Public circulation of a draft environmental document is expected in Fall 2008.	Various roadways between Linden Avenue and Bailard Avenue	Traffic, Noise, Air Quality, Water Quality, Biology, Community Impacts, Visual Impacts, Hazardous Waste, Wetlands	PP
SB U.S. 101 TMS South Project	This State Highway Operation and Protection Program (SHOPP) project proposes to provide Intelligent Transportation System (ITS) vehicle detectors on U.S. 101 in Santa Barbara County. The primary objective of this project is to capture traffic speed and volume information to effectively monitor and manage the freeway. When fully implemented and integrated with the District Transportation Management Center the project can also provide real-time traffic information to the traveling public to help make travel decisions.	U.S. 101 from the Santa Barbara/Ventura County line (PM 0.0) to Garden Street (PM 13.6)	Traffic, Noise, Air Quality Visual Impacts, Hazardous Waste	D
Coral Casino Project	Revision to Development Plan to include renovations and various additions to the Coral Casino Beach and Cabana Club and related modifications to the Four Seasons Biltmore across the street.	1281 and 1260 Channel Drive, Santa Barbara, 93108	Traffic, Air Quality, Noise, Hazardous Materials	B

Miramar Hotel	This project would involve the demolition of all existing structures on the property and the addition of 397,925 square feet of structural development, excluding paved areas. Reconstruction would include a new restaurant, ballroom, spa, lobby, guestrooms, retail buildings, and a new beach and tennis club.	1555 South Jameson Lane, Santa Barbara, 93108	Traffic, Air Quality, Noise, Hazardous Materials	P
<b>Ventura County</b>				
VEN U.S. 101 Punta Gorda UC/Rincon Point Drainage Culvert Report	This project proposes to replace the drainage culvert at the Punta Gorda under-crossing/Rincon Point. This is a SHOPP project in the project initiation phase.	U.S. 101 from PM 41.3 to PM 42.1	Water Quality, Air Quality, Biological, Wetlands	PP
VEN U.S. 101 California Street Ramp Improvement Project	This locally funded project proposes to modify freeway off-ramps.	U.S. 101 from PM 29.9 to PM 30.0	Traffic, Air Quality, Noise, Hazardous Materials, Community Impacts, Historical, Archaeological	PP
La Conchita/Mussel Shoals Access Improvement Project	This approved project proposes to construct a pedestrian under-crossing in the community of La Conchita for beach access. This would be constructed concurrent to the proposed project.	Near Santa Barbara Avenue in the Community of La Conchita	Traffic, Air Quality, Noise, Hazardous Materials, Community Impacts, Geotechnical	D

Source: HDR Cumulative Impacts Assessment July 2008

\* Status Definitions:

PP = Pre-Planning phase: The project is proposed, however environmental review has not begun.

P = Programmed: Environmental review has begun on the project but is not yet approved.

D = Design: Environmental review has been completed, but construction of the project has not begun.

C = Construction: As of this document, project is under construction.

B = Build-out: The project is fully constructed to build-out conditions.

XX = Status currently unknown

## Environmental Consequences

The following section identifies direct and indirect impacts associated with the proposed project that could contribute to a cumulative impact on the identified resources. Both BUILD alternatives impacts are similar in nature, so the discussion does not differentiate between the two proposed project alternatives.

### Aesthetics/Visual Resources

Temporary visual impacts would result from construction activities, such as vegetation removal, equipment storage, and other changes to the existing setting. This, in conjunction with other construction projects along the U.S. 101 corridor, would disrupt the unity of the natural scenery during the construction period. However, following construction the highway corridor would remain substantially the same in appearance, and the design does not include any features that would reduce or block views to the ocean or surrounding hills. With implementation of the proposed mitigation measures identified in the visual impacts section of the document, visual impacts would be reduced to the extent feasible, and the project contribution to cumulative visual impacts would be considered less than cumulatively considerable.

### Air Quality

Project construction would result in a temporary increase of pollutant emissions associated with construction equipment and dust; however, construction-related

emissions would be minimized through standard practices to reduce emissions, and project construction is not anticipated to violate state or federal air quality standards or contribute to the existing air quality violation in the air basin. Although other construction projects could occur concurrent to the proposed project, emissions would be localized, and the same standard reduction measures would be required. Operation of the proposed project would comply with all applicable air quality plans, and be expected to improve traffic circulation in the area, which would result in improved air quality. Therefore, project contributions to cumulative air quality impacts are considered less than cumulatively considerable.

### Noise

The planned development closest to the proposed project is the Lagunitas Mixed Use Development, located approximately 147 feet from the U.S. 101 median. Construction of the Lagunitas Mixed Use Development project is anticipated to be completed prior to the start of construction for the proposed project. Because construction activities would not be concurrent to those of the proposed project, cumulative noise impacts would not occur. No other projects would be constructed in the vicinity concurrent to the proposed project.

Based on existing and future anticipated traffic levels, it was determined that operational noise increases associated with the proposed project would be less than three dBA –  $L_{eq}$ , which is not considered to be an adverse impact. Therefore, while some other development may occur in the area, the project contribution to cumulative noise impacts is considered to be less than cumulatively considerable.

### Traffic and Transportation

During construction of the proposed project, temporary lane closures, construction equipment, and posted reduction of speed limits may occur. This could result in traffic congestion on the mainline, local streets, and bikeways; however, these impacts would be temporary and a TMP would be developed for the project to reduce congestion and provide information to roadway users. Temporary impacts, in conjunction with other roadway projects that may be under construction, could result in additional delays; however, with implementation of the TMP the project contribution to cumulative traffic impacts is considered less than cumulatively considerable.

The proposed project includes the closure of several median openings, which would restrict left turns into and out of Mussel Shoals and La Conchita and U-turns at Tank Farm. These closures would result in some additional travel time for drivers required to reroute; however, in some cases this rerouted travel time is expected to be less than the



wait time to turn onto U.S. 101 through the median openings would be for the NO BUILD alternative. Closing the median openings would also prevent drivers from making unsafe maneuvers resulting from frustration with long wait times. No cumulative impacts are anticipated to result from these closures.

The project also includes an option for modification of the existing southbound bikeway and construction of a northbound 2 directional Class I Bicycle facility. Upgrades to the bicycle facility are identified as beneficial impacts and would facilitate movement of cyclists through the corridor. Construction of a pedestrian under-crossing at La Conchita would improve beach access for the community. These improvements would result in an overall beneficial impact to the local and regional bikeway and pedestrian facilities; therefore, cumulative contributions would be considered less than cumulatively considerable.

### **Avoidance, Minimization and/or Mitigation Measures**

With implementation of standard minimization measures and mitigation measures proposed in this IS/EA, project contributions to cumulative impacts would be considered less than cumulatively considerable, and no additional mitigation measures are required.

## **2.5 Climate Change (CEQA)**

### **Regulatory Setting**

While climate change has been a concern since at least 1988 as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change, the efforts devoted to greenhouse gas emissions reduction and climate change research and policy have increased dramatically in recent years. In 2002, with the passage of Assembly Bill 1493, California launched an innovative and proactive approach to dealing with greenhouse gas emissions and climate change at the state level. Assembly Bill 1493 requires the Air Resources Board to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions; these regulations will apply to automobiles and light trucks beginning with the 2009 model year. Greenhouse gases related to human activity include carbon dioxide, methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (1,1,1,2-tetrafluoroethane), and HFC-152a (difluoroethane).

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this executive order is to reduce California's greenhouse gas emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020, and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly



Bill 32, the Global Warming Solutions Act of 2006. Assembly Bill 32 sets the same overall greenhouse gas emissions reduction goals while further mandating that the Air Resources Board create a plan, which includes market mechanisms, and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” Executive Order S-20-06, signed on October 17, 2006, further directs state agencies to begin implementing Assembly Bill 32, including the recommendations made by the State’s Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California’s transportation fuels is to be reduced by at least 10 percent by 2020.

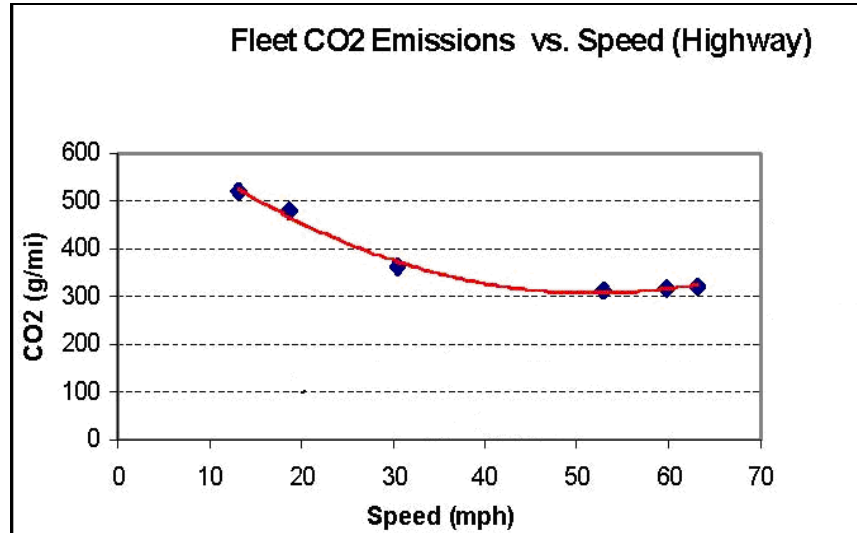
Climate change and GHG reduction is also a concern at the federal level; at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. However, California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency (EPA) to regulate GHGs as a pollutant under the Clean Air Act (*Massachusetts vs. Environmental Protection Agency et al.*, U.S. Supreme Court No. 05–1120. Argued November 29, 2006–Decided April 2, 2007). The court ruled that GHGs do fit within the Clean Air Act’s definition of a pollutant, and that EPA does have the authority to regulate GHGs. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting greenhouse gas emissions.

According to a recent white paper by the Association of Environmental Professionals, “an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases.”

The Department and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, The Department has created and is implementing the *Climate Action Program at The Department’s* (December 2006). Transportation’s contribution to GHG emissions is dependent on 3 factors: the types of vehicles on the road, the type of fuel the vehicles use, and the time/distance the vehicles travel.

One of the main strategies in The Department’s Climate Action Program to reduce GHG emissions is to make California’s transportation system more efficient. The highest

levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 mph; the most severe emissions occur from 0-25 miles per hour see Figure 2.5-1.



Source: Center for Clean Air Policy.

**Figure 2.5-1 CO2 Emissions vs Speed (Highway)**

Relieving congestion by enhancing operations and improving travel times in high congestion travel corridors will lead to an overall reduction in GHG emissions.

### **Affected Environment**

The purpose of this project is to improve mobility by reducing existing and forecasted traffic congestion on U.S. 101 within the project limits. The proposed project would reduce congestion on U.S. 101 and is expected to enhance traffic operations by adding capacity in an area that experiences delay during peak hours and enhance safety within the project limits, while minimizing environmental and socio-economic impacts. See Chapter 1 for a full discussion on the purpose and need and Chapter 2 for a full discussion on traffic analysis.

Existing land uses within the project area remain unchanged for the alternatives. Therefore, the proposed project would not increase the percentage of vehicles operating in cold start mode. In addition, closing the three median openings at Mussel Shoals, La Conchita and Tank Farm would reduce idling emissions at these three intersections.

As shown in Table 2.5-2, in comparison of the “BUILD” and NO BUILD alternative, total peak hour volume (mixed-flow + truck + HOV volumes) for 2016 remains unchanged. For 2036, SB “BUILD” total peak hour volume increased by 4.65 percent over the “NO BUILD.”

**Table 2.5-1 Peak Hour Volume for Existing, Opening, and Horizon Years**

Analysis Years	Alternatives	Peak Hour Volumes					
		SB (PM Peak)			NB (AM Peak)		
		MF	Truck	HOV	MF	Truck	HOV
Existing (2006)		1745	122		3608	252	
Opening (2016)	NO BUILD Alternative	3616	244		4040	160	
	MINIMUM BUILD Alternative	2585	244	1031	3303	160	737
	FULL BUILD Alternate	2585	244	1031	3303	160	737
Horizon (2036)	NO BUILD Alternative	4860	217		4420	245	
	MINIMUM BUILD Alternative	3970	217	1126	3330	216	1092
	FULL BUILD Alternate	3970	217	1126	3330	216	1092
Notes: - US 101 Corridor exhibits very strong behavior of roughly one hour. Morning (6am-7am) Peak NB and afternoon (4pm-5pm) Peak SB - MF: Traffic movements in Mixed Flow Lane(s) or General Purpose Lane(s) inclusive of truck traffic.							

Sources: The Department's District 7, Division of Planning, Public Transportation, and Local Assistance, November 2007, SCAG, Destination 2030: 2004 Regional Transportation Plan, Adopted April 2003.

However, as shown in Table 2.5-3 on the next page, SB “BUILD” speed increased to 43.1 mph in comparison to the “NO BUILD” speed of 30.3 mph, an increase of 12.8 mph. The NB “BUILD” total peak hour volume is less than the “NO BUILD” volumes. The proposed project is not anticipated to result in an increase in traffic volumes.

**Table 2.5-2 Peak Hour Speeds for Existing, Opening, and Horizon Years**

Analysis Years	Alternatives	Peak Hour Speeds			
		SB (PM Peak Hour)		NB (AM Peak Hour)	
		MF	HOV	MF	HOV
Existing (2006)		57		55	
Opening (2016)	NO BUILD Alternative	48		42	
	MINIMUM BUILD Alternative	60	62	53	65
	FULL BUILD Alternate	60	62	53	65
Horizon (2036)	NO BUILD Alternative	30		37	
	MINIMUM BUILD Alternative	43	59	52	60
	FULL BUILD Alternate	43	59	52	60

*Note: US 101 Corridor exhibits very strong behavior of roughly one hour. Morning (6am-7am) Peak NB and afternoon (4pm-5pm) Peak SB.*

*Sources: The Department's District 7, Division of Planning, Public Transportation, and Local Assistance, November 2007, SCAG, Destination 2030: 2004 Regional Transportation Plan, Adopted April 2003.*

## Environmental Consequences

Based upon federal approval of the air quality conformity findings in the SCAG 2004 RTP and 2006 RTIP, SBCAG's 2004 MTP, and the project's inclusion in the overall plan, the reduction in vehicle hours traveled (vht) and improved traffic flow, carbon dioxide emissions should be reduced despite what may be an increase in vehicle miles traveled (vmt).

The Department recognizes the concern that carbon dioxide emissions raise for climate change. However, accurate modeling of GHG emissions levels, including carbon dioxide, at the project level is not currently possible. No federal, state or regional regulatory agency has provided methodology or criteria for GHG emission and climate change impact analysis. Therefore, The Department is unable to provide a scientific or regulatory-based conclusion regarding whether the project's contribution to climate change is cumulatively considerable.

The Department continues to be actively involved on the Governor's Climate Action Team as ARB works to implement AB 1493 and AB 32. As part of the *Climate Action Program at the Department* (December 2006), the Department is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density

housing along transit corridors. The Department is working closely with local jurisdictions on planning activities; however, the Department does not have local land use planning authority. The Department is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks. However it is important to note that the control of the fuel economy standards is held by the United States Environmental Protection Agency and ARB. Lastly, the use of alternative fuels is being considered and continuing research on alternative fuels is being conducted at the University of California Davis.

### **Avoidance, Minimization and/or Mitigation Measures**

To the extent that it is applicable or feasible for the project, the following measures can also help to reduce the GHG emissions and potential climate change impacts from projects:

- Use of reclaimed water—currently 30% of the electricity used in California is used for the treatment and delivery of water. Use of reclaimed water helps conserve this energy, which reduces GHG emissions from electricity production.
- Landscaping—reduces surface warming and through photosynthesis decreases CO<sub>2</sub>.
- Portland cement—use of lighter color surfaces such as Portland cement helps to reduce the albedo effect and cool the surface; in addition, the Department has been a leader in the effort to add fly ash to Portland cement mixes. Adding fly ash reduces the GHG emissions associated with cement production—it also can make the pavement stronger.
- Use of energy efficient lighting, such as LED traffic signals.
- Idling restrictions for trucks and equipment.



## **Chapter 3    Comments and Coordination**

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This chapter summarizes the results of the Department's efforts to fully identify, address, and resolve project-related issues through early and continuing coordination. Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings, interagency coordination meetings, scoping meetings, community outreach and focused meetings. This chapter summarizes the results of the Department's efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

### ***Scoping***

A Notice of Scoping/Initiation of Studies letter was sent to elected officials, state, federal and local agencies, and to the public on August 13, 2007. The notice briefly described the project, solicited written comments or suggestions, and extended an invitation to a scoping meeting on August 28, 2007 at the Carpinteria Council Chambers.

The purpose of this meeting was to introduce the project, explain the environmental process and to solicit input. A scoping summary report was completed in October 2007 outlining issues and comments received as a result of the scoping process. Concerns regarding traffic management during construction, emergency access at proposed median closures and safety for bicyclists, pedestrians, and motorists were raised. Also, a representative from La Conchita indicated they did not want soundwalls blocking their view of the ocean, and they support the construction of the PUC. In addition, a representative from the CHP attended the meeting and voiced his support of the project.

Scoping was conducted from August 13, 2007 through September 13, 2007. Public Scoping meeting notification ads were placed in the following newspapers on the following dates:

- Ventura County Star, August 13 and 14, 2007
- Santa Barbara News Press, August 13 and 22, 2007
- VIDA (in Spanish), August 16, 2007
- Coastal View News, August 23, 2007



## ***Stakeholder Meetings***

### ***Coastal Permit Agencies***

Between July 2007 and December 2007, discussions were held with the California Coastal Commission regarding the Coastal Development Permit (CDP) process. On December 12, 2007 a teleconference was held to discuss the project. Representatives from Caltrans, VCTC, SBCAG, Ventura County, Santa Barbara County, the City of Carpinteria and the California Coastal Commission participated. After discussing the project, it was determined that Ventura County, the City of Carpinteria and Santa Barbara County have jurisdiction over the CDP and each agency has its own permit process and application requirements. Therefore, the Department must submit separate applications to each agency. Additionally, Coastal Commission staff agreed to relinquish its jurisdiction to Ventura County regarding the permit for the PUC. On January 24, 2008 a meeting was held with Ventura County Manager of Land Use Permits and on March 28, 2008 with the City of Carpinteria Community Development Director to discuss the specific CDP application process and requirements. Information necessary for the permit application and timelines for submittal and review were discussed and the Department was informed that a hearing and approval from the planning commission would be required prior to permit approval.

### ***Elected Officials***

An elected officials briefing was held on April 3, 2008 to discuss project highlights. Briefings were held with representatives of the following elected officials who were in office in 2008:

- Ventura County Supervisor Steve Bennett
- Office of Assembly member Pedro Nava
- Office of Santa Barbara County Supervisor Salud Carbajal

Also, a presentation was given to the Carpinteria Council on June 12, 2008, and on July 11, 2008 the Ventura County Transportation Commission (VCTC) Board was addressed about the project as was the Santa Barbara County Association of Governments (SBCAG) Board on July 17, 2008.

### ***Native American Coordination/Section 106 Compliance***

The Chumash Native American Federally recognized “tribe” exists within the project study area; however, the Chumash do not historically seek to provide input into projects in this area since the area is away from the location of the “tribal” administrative headquarters in Solvang, California. An effort was undertaken to ensure compliance with

Section 106 of the National Historic Preservation Act of 1966 in regards to consultation with “other parties likely to have knowledge of or concerns with historic properties in the area”. Below are the steps conducted to ensure this compliance:

- On July 26, 2007 a request was made to the Native American Heritage Commission (NAHC) for a search to be conducted of the Sacred Lands Inventory, and for a list of interested Native American individuals/organizations for the project area.
- On August 2, 2007 the NAHC returned a response that indicated that no sites were identified to exist in the project area on the Sacred Lands Inventory and a list of interested Native American individuals/organizations was included in the August 2, 2007 response from the NAHC.
- On August 2, 2007 (incorrectly labeled May 31, 2006) a letter and accompanying map was sent to a list of interested individuals/organizations. This letter requested a response within 30 days.

On the following dates: August 8 and 15, 2007, September 15, 2007, and March 11 and 12, 2008, contact was made with the interested Native American individuals/organizations. The conclusion of this Native American interested individual/organization consultation was that the project appears to be within the area where a Native American archaeological site occurs. As such, sites need to be protected by an Environmentally Sensitive Area (ESA) fence. To ensure that any unforeseen Native American cultural material is dealt with in a timely and appropriate manner, a Native American Monitor would be on site during ground disturbing activities.

### **Value Analysis**

Value Analysis (VA) or Value Engineering (VE) is a function oriented, structured, multi-disciplinary team approach to solving problems or identifying improvements. The goal of any VA Study is to: improve value by sustaining or improving performance attributes (of the project, product, and/or service being studied) while at the same time reducing overall cost (including lifecycle operations and maintenance expenses). During this phase of the project, a multi-agency, multi-disciplinary team was assembled to study the existing alternatives alongside the Department, as well as to propose new design alternatives, and if necessary, drop existing design alternatives. This phase was conducted during January and February 2008. The stakeholders, who were invited and attended, were representatives from District 7 and 5, SBCAG and VCTC. The cost saving strategies recommended by the VA consisted of: reduction of project construction time, re-use of excavated soils with low-levels of Aerially Deposited Lead (ADL) within the project limits, construction of a NB Class I bikeway and construction of a PUC at the southern end of La Conchita.

### **Community Based Meetings**

On April 29, 2008 The Department staff met with members of the La Conchita Community Organization (LCCO). The Department staff presented the project and listened to the community concerns about freeway signage, construction impacts, PUC and bikeway maintenance and design.

On April 30, 2008, Department staff met with Mussel Shoals Homeowners association Boardmembers. A presentation was given and there was a discussion concerning intersection design, better signage, higher soundwall heights, visibility for the Cliff House Inn, PUC beachside maintenance, and the southbound bikeway.

July 8, 2008, Department staff met with the Vista Del Santa Barbara Mobile Home Association in Carpinteria. A presentation was given and there was a discussion regarding the proposed soundwalls north and south of Bailard Avenue.

July 16, 2008 , Department staff met with the Villa Del Mar condominium residents in Carpinteria. A presentation was given and there was a discussion regarding the proposed soundwalls north and south of Bailard Avenue.

### **Bicycle Community**

On February 13, 2008, a meeting was held with bicycle organization representatives from the Santa Barbara Bicycle Coalition and Ventura Velo to discuss preliminary bikeway improvements. Bicycle organizations were in support of improvements to the existing bikeway on the highway and favored a Class I bicycle way if it were determined to be feasible. On June 12, 2008 a follow up meeting was held with the Bicycle representatives from Santa Barbara Bicycle Coalition, Channel Island Bicycle Club and Ventura Velo as well as representatives from Supervisor Steve Bennett's office and other cyclists who use the route. Visual simulations were presented and design options advantages and disadvantages were discussed

### **Newsletters**

The public outreach program includes preparation of a newsletter to notify the public of major issues and upcoming milestones related to the project. The newsletter explains the environmental review process, provides information on community concerns related to the proposed alternatives, provides a schedule for the proposed project, gives general updates and contact information for questions and/or concerns related to the project. The distribution of the newsletter is based upon a mailing list that includes attendees to the scoping meetings, local public officials, interested parties, local libraries, and stakeholders identified by each city within the study area. The first newsletter was

distributed in July 2008. Newsletters will continue to be distributed periodically throughout the development process.

***IS/EA Public Comment Period and Public Hearing***

The Department is soliciting questions, comments, and concerns from all stakeholders regarding the proposed project and its potential environmental and community impacts as discussed in this IS/EA. The Department will also hold a public hearing so that all stakeholders may voice their questions, comments, and concerns in person. All written comments received during this Public Comment Period, as well as verbal comments made at the public hearing, will be considered formal comments and will become part of the public record.

To view the project mailing list, please refer to Chapter 5 of this document.



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Jack G & Karen S Oren  
Resident  
7051 N Sunland Ave.  
Ventura, CA 93001

Jack M & Betty J Brodowy  
Resident  
514 Avenida de La Vereda  
Ojai, CA 93023

Jacob L Ribis Jr.  
Resident  
2470 Stokes Canyon Rd.  
Calabasas, CA 91302

James C & Tianna T Lundy  
Resident  
5401 Business PK SO #206  
Bakersfield, CA 93309

James I Beck  
Resident  
7096 Sunland Ave.  
Ventura, CA 93001

Jeffrey D Ross  
Resident  
P.O. Box 3435  
Santa Barbara, CA 93105

Jerome A Nesnadny  
Resident  
7096 Santa Paula Ave.  
Ventura, CA 93001

Jerry J & Beatrice V Dunn  
Resident  
6747 Ojai Ave.  
Ventura, CA 93001

Jessie O Arvizu  
Resident  
6746-3 Encino Ave.  
Van Nuys, CA 91406

Jesus Perez  
Resident  
6749 Ojai Ave.  
Ventura, CA 93003

Jim & Ellen Frew  
Resident  
7198 Santa Paula Ave.  
Ventura, CA 93001

Jimmy Cox  
Resident  
25214 Huston St.  
Stevenson Ranch, CA 91381

Jimmy Cox  
Resident  
7178 Carpinteria Ave.  
Ventura, CA 93001

John Lomagno  
Resident  
6320 Fiesta St.  
Ventura, CA 93003

John & Sharon Frascatore  
Resident  
7170 Carpinteria Ave.  
Ventura, CA 93001

John A & Dixie G Zimmer  
Resident  
7076 Sunland Ave.  
Ventura, CA 93001

John A & Kathleen Wood  
Resident  
6750 Ojai Ave.  
Ventura, CA 93001

John C Boggis  
Resident  
3507 Perlita Ave.  
Los Angeles, CA 90039

John H & Theo E Colpitts  
Resident  
6997 Bakersfield Ave.  
Ventura, CA 93001

Joseph & Victoria Scheck  
Resident  
17127 Village 17  
Camarillo, CA 93010

Joseph W & Elena Karalius  
Resident  
43 Irena  
Camarillo, CA 93012

Juanita Brooks  
Resident  
5141 Tapo Canyon Rd.  
Simi Valley, CA 93063

Julio Varela  
Resident  
6786 Santa Barbara  
Ventura, CA 93001

Junichi & Shigeko Asakura  
Resident  
7118 Santa Paula Ave.  
Ventura, CA 93003

Kary R & Terri R Kump  
Resident  
6968 Fillmore Ave.  
Ventura, CA 93001

Katheryn V Sturm  
Resident  
1462 Warwick Ave.  
Thousand Oaks, CA 91360

Kathie Klock  
Resident  
7066 Sunland Ave.  
Ventura, CA 93001

Bonnie & Bill Kelm-Malis  
Resident  
7098 Sunland Ave.  
Ventura, CA 93001

Kenneth R & Patricia A Stanley  
Resident  
748 W San Martin Pl.  
Thousand Oaks, CA 91360

Kent Remsen  
Resident  
7078 N Sunland Ave.  
Ventura, CA 93001

Kim Bennett  
Resident  
6893 San Fernando Ave.  
Ventura, CA 93001

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Resident  
6923 Fillmore Ave.  
Ventura, CA 93001

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Resident  
6921 Vista del Rincon  
Ventura, CA 93001

Lawrence P Ryan  
Resident  
6955 Vista del Rincon Dr.  
Ventura, CA 93001

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Resident  
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Ventura, CA 93001

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Burbank, CA 91505

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Pollock Pines, CA 95726

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Resident  
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Ventura, CA 93001

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Resident  
6947 Vista del Rincon  
Ventura, CA 93001

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Resident  
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Glendale, CA 91201

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Resident  
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Burbank, CA 91505

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Resident  
1277 La Culebra Cr.  
Camarillo, CA 93012

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Resident  
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Atascadero, CA 93422

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Resident  
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Ventura, CA 93001

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Resident  
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Resident  
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Ventura, CA 93001

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Resident  
6959 Vista del Rincon  
Ventura, CA 93001

Michael Chavez  
Resident  
7007 Surfside Dr.  
Ventura, CA 93001

Michael W Scheck  
Resident  
6952 Fillmore Ave.  
Ventura, CA 93001

Mike & Barbara Bell  
Resident  
6953 Surfside St.  
Ventura, CA 93001

Mildred Bray  
Resident  
7039 Bakersfield Ave.  
Ventura, CA 93001

Nancy Morgan  
Resident  
3930 Marshall St.  
Ventura, CA 93003

Nancy L Tolivar  
Resident  
633 N La Cumbre Rd.  
Santa Barbara, CA 93110

Nels P & Gloria Nelson  
Resident  
3729 Reklaw Dr.  
Studio City, CA 91604

Nichole C Oudyk  
Resident  
11141 Tarawa Dr.  
Los Alamitos, CA 90720

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Resident  
4201 Cork Ln.  
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Resident  
6935 Vista del Rincon  
Ventura, CA 93001

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North Hills, CA 91343

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Resident  
6936 Fillmore Ave.  
Ventura, CA 93001

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Resident  
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Ventura, CA 93001

Randolph E & Lesley A Stone  
Resident  
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Ventura, CA 93001

Randy Hart  
Resident  
6929 Vista del Rincon  
Ventura, CA 93001

Ray & Gail Granger  
Resident  
6842 Zelzah Ave.  
Ventura, CA 93001

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Resident  
8920 Candy  
Northridge, CA 91325

Rev Clarke  
Resident  
2831 E. Bloomington Dr.  
ST George, UT 84770

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Resident  
1467 Reynolds Ct.  
Thousand Oaks, CA 91362

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Resident  
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Ventura, CA 93001

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Resident  
6967 Vista del Rincon  
Ventura, CA 93001

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Resident  
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Ventura, CA 93001

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Resident  
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Resident  
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Ventura, CA 93001

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Resident  
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Arvin, CA 93203

Socorro Cule  
Resident  
6911 Vista del Rincon  
Ventura, CA 93001

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Resident  
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Oak Park, CA 91377

Steve & Jean Kosztics  
Resident  
6969 Vista del Rincon  
Ventura, CA 93001

Steve Zina Kuhn  
Resident  
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Ventura, CA 93001

Steven A Baker  
Resident  
6931 San Fernando Ave.  
Ventura, CA 93001

Sue Harrison  
Resident  
LCCD  
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Ventura, CA 93001

Ted Jennings  
Home Owner  
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Ventura, CA 93001

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Resident  
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Thierry M Brown  
Resident  
P.O. Box 774  
Carpinteria, CA 93014

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Resident  
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Ventura, CA 93001

Thomas J & Jacque W Fuller  
Resident  
7935 Dusty Ln.  
Somis, CA 93066

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Resident  
7170 Santa Paula Ave.  
Ventura, CA 93001

Thomas M Jordan  
Resident  
7145 Santa Paula Ave.  
Ventura, CA 93001

Timothy L Seider  
Resident  
7095 Sunland Ave.  
Ventura, CA 93001

Todd Henny  
Resident  
6833 Zelzah Ave.  
Ventura, CA 93001

Todd law  
Resident  
6905 San Fernando Ave.  
Ventura, CA 93001

Tom Fuller  
Home Owner  
7003 Surfside St.  
Ventura, CA 93001

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Resident  
6820 Santa Barbara Ave.  
Ventura, CA 93001

Walter John Clark  
Resident  
29 Windcrest  
Laguna Niguel, CA 92677

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Resident  
6977 Vista del Rincon  
Ventura, CA 93001

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Resident  
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Ventura, CA 93001

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Resident  
441 E 37th St.  
Lon Beach, CA 90807

William V & Mary F Lanphar  
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N Hollywood, CA 91606

Covington  
Resident  
1210 W Curie Ave.  
Santa Ana, CA 92707

B-B Partnership  
26951 Ruether Ave., Ste. B-1  
Canyon Country, CA 91351

La Conchita Trust  
1365 S Oakland Ave.  
Pasadena, CA 91106

La Conchita  
Ranch CO  
7015 Vista del Rincon  
Ventura, CA 93003

Pulliam  
7015 Bakersfield  
Ventura, CA 93001

Resident  
6746 Ojai  
Ventura, CA 93001

Resident  
6760 Ojai Ave.  
Ventura, CA 93001

Owner  
6776 Ojai Ave.  
Ventura, CA 93001

Resident  
6798 Ojai  
Ventura, CA 93001

Resident  
6802 Santa Barbara Ave.  
Ventura, CA 93001

Resident  
6806 Santa Barbara Ave.  
Ventura, CA 93001

Owner  
6812 Santa Barbara Ave.  
Ventura, CA 93001

Owner  
6816 Santa Barbara Ave.  
Ventura, CA 93001

Resident  
6822 Santa Barbara Ave.  
Ventura, CA 93001

Resident  
6823 Vista del Rincon  
Ventura, CA 93001

Resident  
6832 Zelzah  
Ventura, CA 93001

Resident  
6910 San Fernando  
Ventura, CA 93001

Resident  
6917 San Fernando Ave.  
Ventura, CA 93001

Resident  
6923 Surfside Dr.  
Ventura, CA 93001

Resident  
6931 Fillmore Ave.  
Ventura, CA 93001

Owner  
6943 Fillmore Ave.  
Ventura, CA 93001

Resident  
6953 Fillmore Ave.  
Ventura, CA 93001

Resident  
6961 Vista del Rincon  
Ventura, CA 93001

Owner  
6973 North Fillmore Ave.  
Ventura, CA 93001

Resident  
6976 Bakersfield Ave.  
Ventura, CA 93001

Resident  
6983 Vista del Rincon Dr.  
Ventura, CA 93001

Owner  
6985 Vista del Rincon Dr.  
Ventura, CA 93001

Resident  
6991 Surfside St.  
Ventura, CA 93001

Resident  
6994 Vista del Rincon  
Ventura, CA 93001

Resident  
7006 Oxnard Ave.  
Ventura, CA 93001

Resident  
7021 Oxnard Ave.  
Ventura, CA 93001

Resident  
7035 Oxnard Ave.  
Ventura, CA 93001

Owner  
7048 Oxnard Ave.  
Ventura, CA 93001

Resident  
7050 Bakersfield Ave.  
Ventura, CA 93001

Resident  
7057 Sunland  
Ventura, CA 93001

Dan Rogers  
Resident  
7108 Santa Paula Ave.  
Ventura, CA 93001

## ***Carpinteria***

Amrita Salm  
Board member  
Carpinteria Unified School District  
1400 Linden Ave.  
Carpinteria, CA 93013

Beverly Grant  
Board member  
Carpinteria Unified School District  
5529 Canalino Dr.  
Carpinteria, CA 93013

Christie Boyd  
Carpinteria Seal Watch  
P.O. Box 700  
Carpinteria, CA 93013

Chuck McQuary  
Board president  
MTD  
5623 Calle Arena  
Carpinteria, CA 3

Diane Lopez, HOA Manager  
1055 Palmetto Way  
Carpinteria, CA 93013

Jan Evans  
President  
Santa Barbara County Flower &  
Nursery Growers Association  
P.O. Box 1170  
Carpinteria, CA 93014

John & Vera Welty  
Carpinteria Rotary  
4526 Foothill Rd.  
Carpinteria, CA 93013

Jose (Beto) Blanco  
Pastor  
St. Joseph's Catholic Church  
1532 Linden Ave.  
Carpinteria, CA 93013

Libby Weinberg  
Director  
Carpinteria Beautiful  
P.O. Box 3124  
Carpinteria, CA 93013



Doug and Jaleh White  
8128 Puesta Del Sol  
Carpinteria, CA 93013

Marisol Moreno  
Carp. Chapter Leader  
Pueblo  
4956 5th St., Apt. 3  
Carpinteria, CA 93013

Marybeth Carty  
President  
Carpinteria Women's Club  
1059 Vallecito Rd.  
Carpinteria, CA 93013

Rich Medel  
Executive Director  
Capinteria United Boys and Girls  
Club  
4849 Foothill Rd.  
Carpinteria, CA 93013

Ruthie Tremmel  
Executive Director  
Girls Inc.  
5315 Foothill Rd.  
Carpinteria, CA 93013

Ted Rhodes  
Citizens for the Carpinteria Bluffs  
P.O. Box 700  
Carpinteria, CA 93014

Vera Bensen  
Carpinteria Valley Association  
P.O. Box 27  
Carpinteria, CA 93013

Gary Campopiano  
5345 8<sup>th</sup> Street  
Carpinteria, CA 93013

John Schmidhauser  
726 Arbol Verde Street  
Carpinteria, CA 93013-2508

Ruth Bevington  
Vista De Santa Barbara Associates  
(Mobile Park)  
6180 Via Real  
Carpinteria, CA 93013

Ben Weiss  
POA President  
Rincon Point  
Property Owners Association

Carpinteria Valley Chamber of  
Commerce  
1056-B Eugenia Place  
Carpinteria, CA 93013

Vera Bensen  
6342 Via Real  
Carpinteria, CA 93013

Resident at  
417 Carpinteria Avenue  
Carpinteria CA 93014

Villa Del Mar Home Owners  
Association (Condos)  
Diane Lopez, HOA Manager  
1055 Palmetto Way  
Carpinteria, CA 93013

Harvey and Maria Lively  
C/o Connie Lively  
9233 SW 8<sup>th</sup> Drive  
Portland, OR 97219  
1000-01

Kate Christensen  
1010-G Bailard  
Carpinteria, CA 93013  
1010-07

Alex and Elicenia Dalsgaard  
1012-E Palmetto Way  
Carpinteria, CA 93013  
1012-05

Michael and Helen Ernst  
1000-B Bailard Ave  
Capinteria, CA 93013  
1000-02

Wayne and Joyce Benza  
1010 Bailard Ave. #H  
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1010-06

Bill Kienzel  
1012 #F Palmetto Way  
Carpinteria, CA 93013  
1012-06

Maria G. Renteria  
1006 Palmetto Way #A  
Carpinteria, CA 93013  
1006-01

Ted and Debra Tursick  
1010-I Bailard Ave.  
Carpinteria, CA 93013  
1010-09

William and Barbara Clingwald  
1015-A Palmetto Way  
Carpinteria, CA 93013  
1015-01

John Brainerd and Lisa Willis  
1006-B Palmetto Way  
Carpinteria, CA 93013  
1006-02

Firmo & Josephine De Mesa &  
Ronald Beachman  
1010-J Bailard Ave.  
Carpinteria, CA 93013  
1010-10

Carmen O. Mann  
1015-B Palmetto Way  
Carpinteria, CA 93013  
1015-02

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1010-A Bailard Ave.  
Carpinteria, CA 93013  
1010-01

Antonio and Maria Gonzalez  
1010 Bailard Ave. #K  
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1010-11

Jacinto and Angela Chavez  
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1015-03

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1010-12

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Lopez  
1015-D Palmetto Way  
Carpinteria, CA 93013  
1015-04

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1015-07

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1018-02

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1020-04

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1020-F Bailard Ave.  
Carpinteria, CA 93013  
1020-05

Victor Plana and Diego Hernandez  
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1025-02

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1025-03

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P.O. Box 6820  
Westminster, CO 80021  
1025-04

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1025-05

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1025-06

Howard Kaplan  
1025-G Palmetto Way  
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1025-08

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1025-10

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Ventura, CA 93003

Sue Harrison  
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Ventura, CA 93001

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San Jose, CA 95112

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## Appendix A CEQA Checklist

### Environmental Factors Potentially Affected

Supporting documentation of all CEQA checklist determinations is provided in Chapter 2 of this Initial Study/Environmental Assessment. Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts and avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2.

	Aesthetics		Hazards & Hazardous Materials		Public Service
	Agriculture Resources		Hydrology/Water Quality		Recreation
	Air Quality		Land Use/Planning		Transportation/Traffic
	Biological Resources		Mineral Resources		Utilities/Service System
	Cultural Resources		Noise		Mandatory Findings of Significance
	Geology/Soils		Population/Housing		

### DETERMINATION: On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	<b>X</b>
I find that the proposed project MAY have a significant effect on the environmental, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unmitigated” impact on the environmental, but at least one effect (1) has been adequately analysed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effect (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Signature

Date



**EVALUATION OF ENVIRONMENTAL IMPACTS:**

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No Impacts
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**1. AESTHETICS** - Would the project:

a) Have a substantial adverse effect on a scenic vista?				<b>X</b>
The proposed project features would not obstruct views of or from the nature preserve or obstruct access.				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				<b>X</b>
There are no substantial trees, rock outcroppings, or historic buildings within the project limits.				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?		<b>X</b>		
Two project features (soundwalls and changeable message sign) do have a potential to obstruct the views of the communities and motorist. Soundwalls at Bailard Interchange would block the residents along Via Real's partial views of the ocean. Soundwalls at La Conchita would block ocean views and proposed soundwalls located on the north side of Mussel Shoals community would block the view of the coastal mountains to the north.				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			<b>X</b>	
The proposed project does not introduce any new highway lighting. The proposed CMS sign would produce a negligible amount of lighting without spilling into the neighboring communities.				

**2. AGRICULTURE RESOURCES** – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				<b>X</b>
The proposed project affects an existing facility and is not expected to change the existing environment of the surrounding area. This would not result in the conversion farmland into non-agricultural use.				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				<b>X</b>
The project would not change or conflict with the existing agricultural zoning.				
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				<b>X</b>
The proposed project would not convert farmland into non-agricultural use.				

**3. AIR QUALITY** - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?				<b>X</b>
The 2006 TIP or RTIP, was adopted by SBCAG in January 19, 2006, and by SCAG on July 26, 2006. FHWA approved the 2006 RTIP on October 2, 2006. The proposed project is listed in TIPs that conform to the purpose of State Air Quality Implementation Plan or SIP; therefore, this project would not conflict with or obstruct the implementation of any of the existing plans.				

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No Impacts
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		<b>X</b>		
Short-term impacts to air quality are expected during construction due to types of work performed, construction equipment and motor vehicles used. Temporary air quality impacts are considered less than significant with the mitigation proposed in the Air Quality section of this IS/EA. A comprehensive analysis of potential air pollutants has concluded that the proposed project alternatives do not pose any significant operational impact on the ambient air quality in the project vicinity.				
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		<b>X</b>		
Operation of the proposed project would comply with all applicable air quality plans, and be expected to improve traffic circulation in the area, which would result in improved air quality. Therefore, project contributions to cumulative air quality impacts are considered less than cumulatively considerable.				
d) Expose sensitive receptors to substantial pollutant concentrations?		<b>X</b>		
During construction adjacent communities will be exposed to pollutants from grading and construction equipment. Construction air quality pollutants would dissipate rapidly. Mitigation measures identified in the Air Quality Section of this IS/EA would reduce the impacts to "less than significant".				
e) Create objectionable odors affecting a substantial number of people?			<b>X</b>	
Construction equipment exhaust may create temporary intermittent odors to nearby communities. The odors should dissipate rapidly.				

#### 4. BIOLOGICAL RESOURCES - Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				<b>X</b>
The Department's biologist conducted surveys of the project area. No habitat or special status species or listed species are present within the project area. The project would not conflict with any local or regional plans or policies for wildlife.				
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				<b>X</b>
No sensitive natural communities or riparian habitats were located within the project site.				
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		<b>X</b>		
Surveys for federally protected wetlands as defined by Section 404 of the Clean Water Act were conducted. No wetlands were identified in the project area, but jurisdictional "waters of the U.S." are within the project vicinity. FULL BUILD Alternative would require extension of a box culvert. Refer to section 2.3.1 Wetlands and Other Waters of the IS/EA for mitigation measures to reduce impacts to				

"less than significant".

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No Impacts
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				<b>X</b>
No wildlife corridors are within the project site.				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				<b>X</b>
The department will comply with the local policies and ordinances protecting biological resources throughout the project limits.				
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				<b>X</b>
No adopted Habitat Conservation Plans or Natural Community Conservation Plans are within the project area.				

**5. CULTURAL RESOURCES** - Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				<b>X</b>
The Historical Property Survey Report prepared by The department showed no historical resources located within the project APE map eligible for the National California or local registers.				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		<b>X</b>		
Archaeological resources are located within the project APE map. An Environmental Sensitive Area (ESA) will be established to protect the sites from any potential effects and will be delineated in the contract plans. Avoidance measures will reduce the project impacts to "less than significant".				
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			<b>X</b>	
A Paleontological monitor would oversee all excavations in the high sensitivity formations south of SR 150.				
d) Disturb any human remains, including those interred outside of formal cemeteries?			<b>X</b>	
ESA fencing would be placed within the established site areas and that an archaeological monitor be present during any ground disturbing activities. Should any cultural resources or human remains be encountered during construction, all work in the area of the discovery must stop until the on-site monitor can evaluate the nature and significance of the find.				

**6. GEOLOGY AND SOILS** - Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			<b>X</b>	
ii) Strong seismic ground shaking?			<b>X</b>	

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No Impacts
iii) Seismic-related ground failure, including liquefaction?			<b>X</b>	
Ground shaking, ground rupture and liquefaction have the potential to occur in the proposed project area. The project structures would be built to current design standards to withstand ground shaking/ground rupture and liquefaction. "Less than significant" impacts are anticipated with Build Alternatives.				
iv) Landslides?				<b>X</b>
The proposed project is predominately on level ground and will not require major grading activities that would cut into the hillside. The proposed project would also stay within the roadway prism and not increase or decrease the potential for landslides.				
b) Result in substantial soil erosion or the loss of topsoil?				<b>X</b>
The existing drainage system would be used to accommodate the new project features. The project would not result in substantial soil erosion or loss of topsoil.				
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				<b>X</b>
Refer to section, iv) Landslides, above.				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				<b>X</b>
The proposed project is not located in an expansive soils area per Geological Report.				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				<b>X</b>
The proposed project does not affect any existing or proposed septic tanks or wastewater disposal systems.				

## 7. HAZARDS AND HAZARDOUS MATERIALS -

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			<b>X</b>	
ADL was found to be present within the shoulders of the roadway and to be within the Department variance thresholds and contaminated soils. The soil would be buried per the variance requirements. Construction of the proposed project would require hazardous materials such as petroleum products and solvents. These products in small amounts would be stored on site. The contractor would be required to have a designated staging area away from sensitive receptors or school site.				
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				<b>X</b>
Please see response a).				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				<b>X</b>
Please see response a).				

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No Impacts
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				<b>X</b>
Per the Hazardous Waste Report completed for the proposed project, no hazardous material sites are located within the project area				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				<b>X</b>
The proposed project is not located within an airport land use plan and is not within 2 miles of a public or private airport.				
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				<b>X</b>
Please see response e).				
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			<b>X</b>	
The proposed project would not impair the implantation or physically interfere with an adopted emergency response plan or emergency evacuation plans. The proposed project will help facilitate traffic through the project area. Construction of the proposed project may temporarily reduce the number of through lanes within the project corridor. As part of the construction outreach process and the Transportation Management Plan, the local agencies and emergency agencies will be notified on a weekly basis of lane closures.				
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				<b>X</b>
The proposed project is upgrading the existing facility. The project would not expose people or structures to a significant risk of wildland fires.				

**8. HYDROLOGY AND WATER QUALITY - Would the project:**

a) Violate any water quality standards or waste discharge requirements?			<b>X</b>	
The proposed project would follow the Department NPDS and SWPPP requirements. The proposed project would not violate any water quality standards. Project impacts would be considered less than significant.				
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				<b>X</b>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			<b>X</b>	

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No Impacts
The proposed project would tie into the existing Department drainage facilities along the project corridor. The project would not require any substantial changes to the existing drainage facility or offsite drainage pattern. Please refer to the Hydrology Section of the IS/EA for the full analysis. Project impacts are considered to be less than significant.				
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				X
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?				
			X	
The Location Hydraulic Study indicated the existing Department drainage facility would be able to accommodate the added runoff caused by the proposed project and BMP's proposed in the Hydrology and Water Quality Sections of the IS/EA would reduce impacts of the stormwater runoff of the U.S. 101 within the project limits. Project impacts are considered less than significant.				
f) Otherwise substantially degrade water quality?			X	
The proposed project would follow the Department NPDS and SWPPP requirements and utilize BMPs to reduce impacts of the stormwater runoff, so water quality would not be substantially degraded and project impacts would be considered less than significant.				
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				
			X	
The proposed project would not cause substantial rising of the elevation of the (100 year) base flood; therefore, there would be no floodplain impact caused by this project to the surrounding areas. The floodway is contained in a channel according to the Flood Insurance Rate Map. The proposed project impacts would be considered less than significant.				
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
Backwater damages would not affect residents, buildings, crops and natural beneficial Floodplain values due to a 100 year storm event as a result of this project and the value of 100 year storm damages to the project are minimal. There would be no longitudinal encroachment, significant encroachment or any support of incompatible Floodplain development. Based upon the Location Hydraulic Study, it is determined that this is a low risk project and impacts would be less than significant.				
j) Inundation by seiche, tsunami, or mudflow?				X
<b>9. LAND USE AND PLANNING - Would the project:</b>				
a) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No Impacts
The proposed project would not conflict with any applicable land use plans, policies or regulations of an agency with jurisdiction over the project (please refer to the Land Use Section of the IS/EA for a full analysis). The proposed project would require local coastal permits from Ventura and Santa Barbara Counties and the City of Carpinteria prior to project construction.				
b) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
The proposed project would not conflict with any applicable habitat conservation plans or natural community conservation plans. No impacts would be anticipated.				

**10. MINERAL RESOURCES** - Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
The proposed project would not result in the loss of availability of known mineral resources. No impacts would be anticipated.				
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				X
The proposed project would not				

**11. NOISE** - Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
The proposed project noise levels would warrant sound attenuation. The proposed project features identify soundwalls for communities along Via Real north of the Bailard Avenue Interchange, La Conchita, and Mussel Shoals. The soundwalls would reduce sound levels per Department protocol. Please refer to the Noise Section of the IS/EA for a more detailed analysis.				
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?		X		
Please refer to section a) above and the Noise Section of the IS/EA.				
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
Please refer to section a) above and the Noise Section of the IS/EA.				
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
Please refer to section a) above and the Noise Section of the IS/EA.				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
The proposed project is not located within two miles of a public airstrip, no impacts are anticipated.				
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X



Please refer to section e)	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No Impacts
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**12. POPULATION AND HOUSING - Would the project:**

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				<b>X</b>
The proposed project is upgrading an existing facility to improve the level of service through the U.S. 101 regional corridor. The proposed project would not construct a new road or extension of a road to indirectly induce population growth in the surrounding areas. No impacts are anticipated.				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				<b>X</b>
No houses will be displaced by the proposed project. No impacts are anticipated.				
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				<b>X</b>
No people would be displaced due to the proposed project. No impacts are anticipated.				

**13. PUBLIC SERVICES -**

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?				<b>X</b>
The proposed project would not increase the demand or create new demand on fire protection services. No impacts anticipated.				
b) Police protection?				<b>X</b>
The proposed project would not increase the demand or create new demand on police protection services. No impacts anticipated.				
c) Schools?				<b>X</b>
The proposed project would not increase the demand or create new demand on school services. No impacts anticipated.				
d) Parks?				<b>X</b>
The proposed project would not increase the demand or create new demand on parks services. No impacts anticipated.				
Other public facilities?				<b>X</b>
The proposed project would not increase the demand or create new demand on other public facilities services. No impacts anticipated.				

**14. RECREATION -**

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				<b>X</b>
The proposed project would not increase the demand or create new demand on regional parks services. No impacts anticipated.				

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No Impacts
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				<b>X</b>

**15. TRANSPORTATION/TRAFFIC** - Would the project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				<b>X</b>
The proposed project would improve the circulation within the project corridor. The proposed project would not result increase the existing traffic load or impact local intersections. No impacts are anticipated.				
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				<b>X</b>
The proposed project would improve the LOS to the mainline U.S. 101 and intersections within the project corridor. No impacts are anticipated.				
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				<b>X</b>
No public or private airports are within the project area. No impacts are anticipated.				
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				<b>X</b>
The proposed project would improve some non standard features. The proposed project would improve the on and off ramps at La Conchita and Mussel Shoals. The proposed project would also close the medians at La Conchita, Mussel Shoals and at Tank Farm. No impacts are anticipated				
e) Result in inadequate emergency access?				<b>X</b>
There may be temporary impacts to emergency access during construction. The TMP would reduce impacts by coordination with the emergency agencies. Due to the temporary nature of the impacts they will be considered less than significant.				
f) Result in inadequate parking capacity?			<b>X</b>	
The project may result in a loss of available parking at the Cliff House Inn; however, the owner would be compensated for any loss of parking on private property the owner.				
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				<b>X</b>
The proposed project would not conflict with adopted policies, plans or programs supporting alternative transportation. No impacts are anticipated.				

**16. UTILITIES AND SERVICE SYSTEMS** - Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				<b>X</b>
The proposed project is a transportation project. The proposed project would not require a wastewater facility. No impacts are anticipated.				

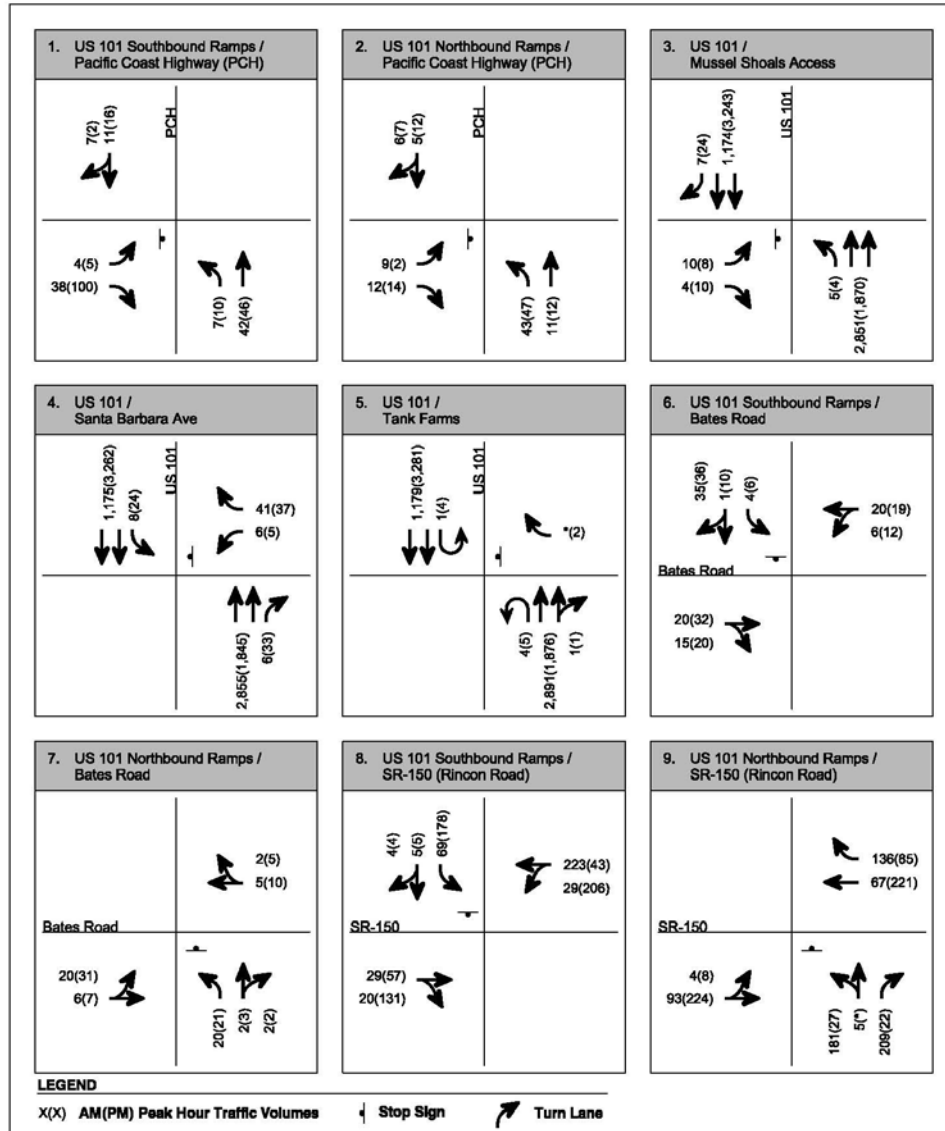
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No Impacts
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.				
The proposed project is a transportation project. The proposed project would not require a wastewater facility. No impacts are anticipated.				
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
The proposed project would not require expansion of existing drainage facilities. Alternative 3 may require the box culverts to be extended for the roadway widening. Project impacts would be considered less than significant.				
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
The proposed project would not required increased water supply. No project impacts are anticipated				
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
The proposed project would require the services of a wastewater treatment plant. No impacts are anticipated.				
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
The proposed project would use a local landfill to dispose of demolition materials. The use of landfill would be temporary and it is Department policy is to recycle materials as much as possible. Project impacts would be less than significant.				
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X
The department would comply with federal, state and local statutes and regulations related to solid waste. No impacts are anticipated.				

**17. MANDATORY FINDINGS OF SIGNIFICANCE -**

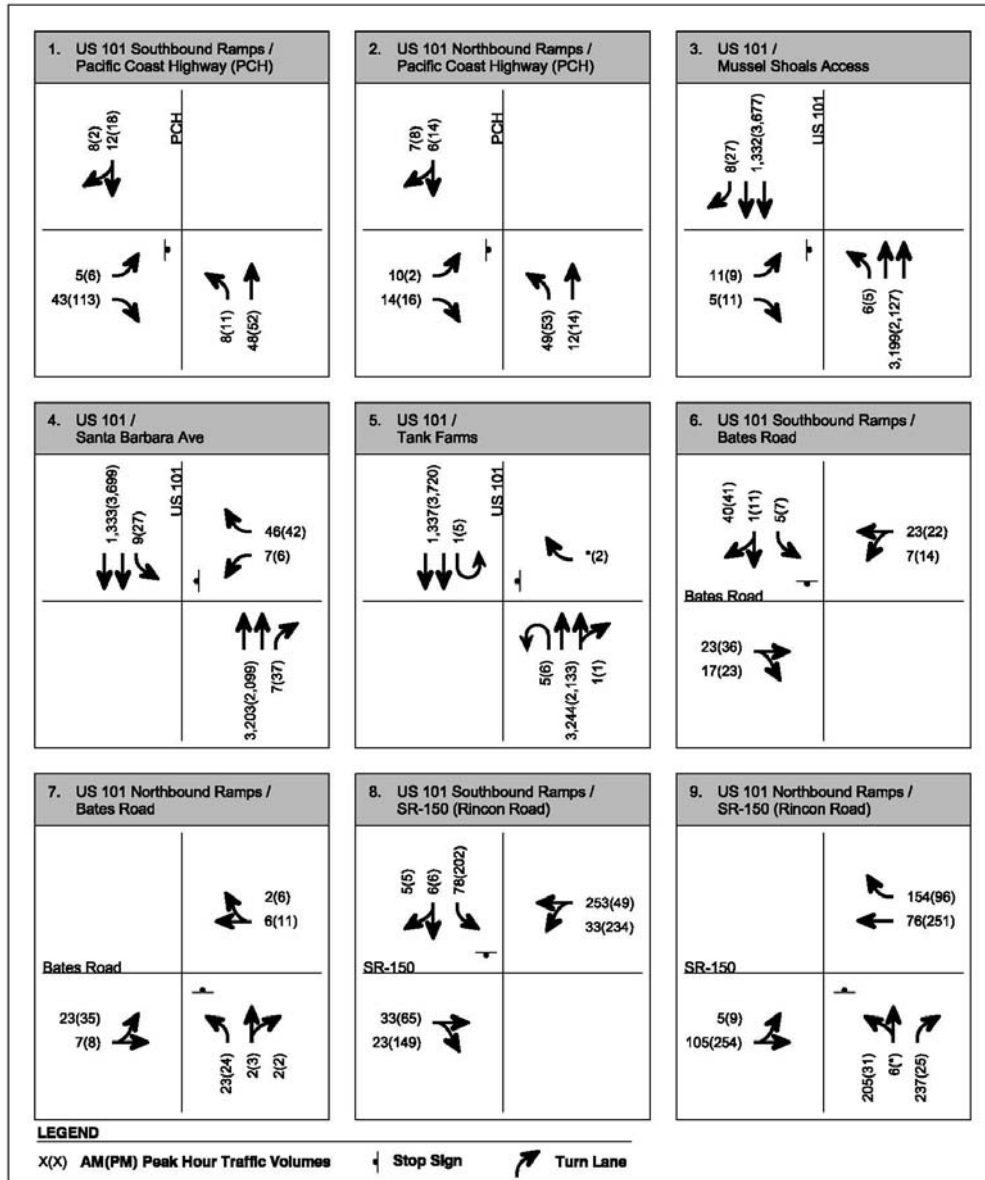
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
As stated in the NES, HPSR and Biological Resources and Cultural Resource Section of the IS/EA the project would not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below a self-sustaining levels, threatened to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important example or the major periods of California				

history or prehistory. Project is considered to be less than significant.				
	Potentially significant impact	Less than significant impact with mitigation	Less than significant	No impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		
The proposed project would not create individually or cumulatively considerable impacts. Please refer to the Cumulative Impacts Section of the IS/EA for full analysis and mitigation measures.				
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly				X
The proposed project would not cause a substantial adverse effect on human beings, either directly or indirectly. No impacts are necessary				

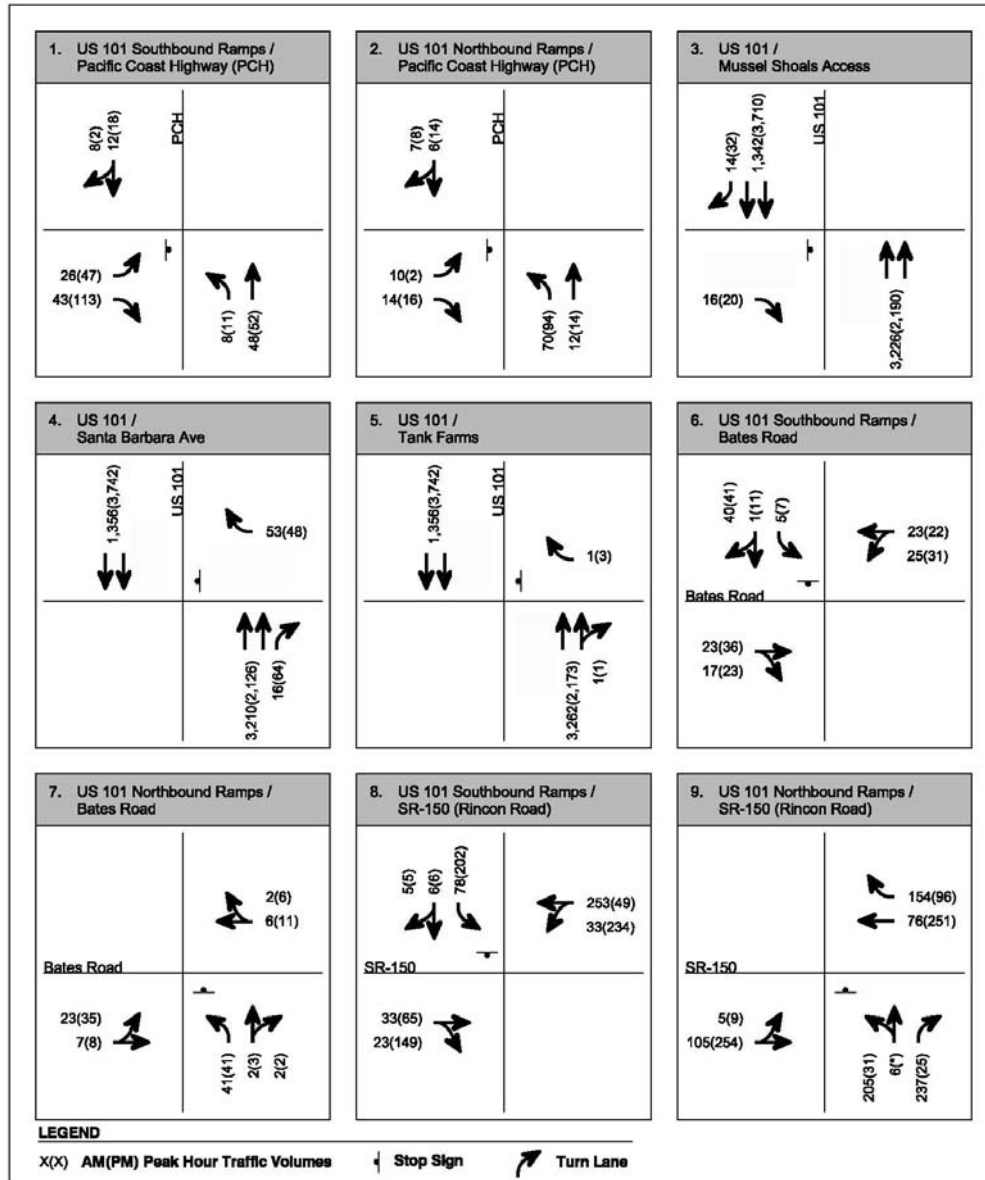
## Appendix B Traffic Flow Charts



Existing

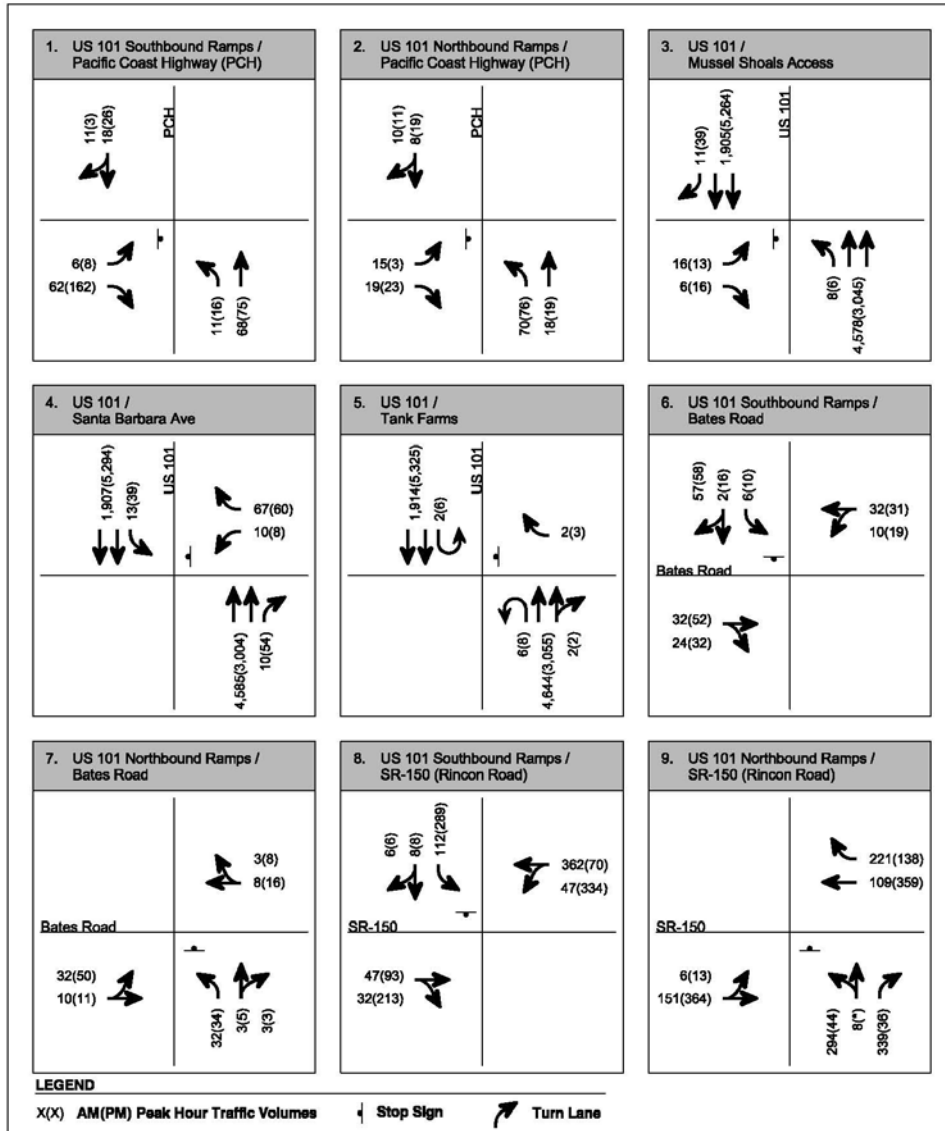


2015 No-Build

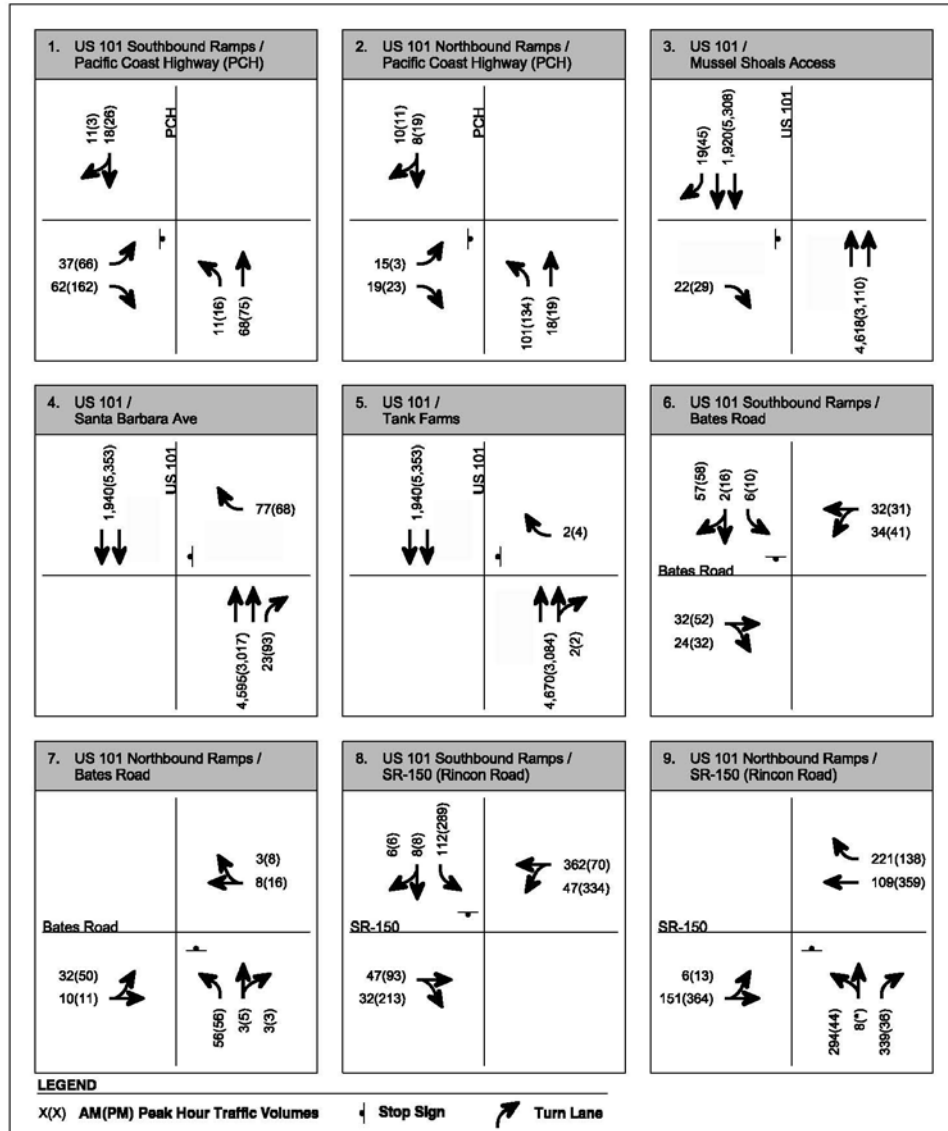


2015 Build





2035 No-Build



2035 Build



# Appendix C Title VI Policy Statement

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STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

## DEPARTMENT OF TRANSPORTATION

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*Flex your power!  
Be energy efficient!*

January 14, 2005

### TITLE VI POLICY STATEMENT

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

A handwritten signature in black ink, appearing to read "Will Kempton".

WILL KEMPTON  
Director

*"Caltrans improves mobility across California"*



## Appendix D Glossary and Abbreviated Terms

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<b>ADT</b>	Average Daily Traffic	<b>FEMA</b>	Federal Emergency Management Agency
<b>AADT</b>	Annual Average Daily Traffic	<b>FESA</b>	Federal Endangered Species Act
<b>ACHP</b>	Advisory Council on Historic Preservation	<b>FHWA</b>	Federal Highway Administration
<b>ACM</b>	Asbestos Containing Materials	<b>FTA</b>	Federal Transit Administration
<b>ACOE</b>	US Army Corps of Engineers	<b>HOA</b>	Home Owners Association
<b>ADA</b>	American with Disabilities Act	<b>HOV</b>	High Occupancy Vehicle
<b>ADL</b>	Aerially Deposited Lead	<b>HP/A</b>	Habitat Present/Absent
<b>APE</b>	Area of Potential Effect	<b>HW</b>	Hazardous Waste
<b>AQ</b>	Air Quality	<b>IGR</b>	Intergovernmental Review
<b>AQMP</b>	Air Quality Management Plan	<b>IRIS</b>	Integrated Risk Information System
<b>ARB</b>	Air Resources Board	<b>ISA</b>	Initial Site Assessment
<b>ASR</b>	Archaeological Study Report	<b>KP</b>	Kilometer Post
<b>BMP</b>	Best Management Practice	<b>LBP</b>	Lead Based Paint
<b>BSA</b>	Biological Study Area	<b>LOS</b>	Level of Service
<b>CAA</b>	Clean Air Act	<b>MFL</b>	Mixed Flow Lanes
<b>CAAA</b>	Clean Air Act Amendments	<b>MLD</b>	Most Likely Descendant
<b>CARB</b>	California Air Resources Board	<b>MMP</b>	Mitigation Monitoring Program
<b>CCR</b>	California Code of Regulations	<b>MMRR</b>	Mitigation Monitoring and Reporting Record
<b>CC &amp; R</b>	Covenants, Conditions, and Restrictions	<b>MOA</b>	Memorandum of Agreement
<b>CDFG</b>	California Department of Fish and Game	<b>MOU</b>	Memorandum of Understanding
<b>CEQ</b>	Council on Environmental Quality	<b>MSAT</b>	Mobile Source Air Toxics
<b>CEQA</b>	California Environmental Quality Act	<b>NAAQS</b>	National Ambient Air Quality Standards
<b>CERCLA</b>	Comprehensive Environmental Response, Compensation and Liability Act	<b>NAC</b>	Noise Ambient Criteria
<b>CERFA</b>	Community Environmental Response Facilitation Act	<b>NAHC</b>	Native American Heritage Commission
<b>CESA</b>	California Endangered Species Act	<b>NATA</b>	National Air Toxic Assessment
<b>CFR</b>	Code of Federal Regulations	<b>NESR</b>	National Environmental Study Report
<b>CHP</b>	California Highway Patrol	<b>NHPA</b>	National Historic Preservation Act
<b>CMP</b>	Congestion Management Plan	<b>NLEV</b>	National Low Emissions Vehicle
<b>CNDDDB</b>	California National Diversity Database	<b>NOA</b>	Naturally Occurring Asbestos
<b>CNPS</b>	California Native Plant Society	<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>CO</b>	Carbon Monoxide	<b>NOD</b>	Notice of Determination (CEQA)
<b>CT</b>	California Department of Transportation (Caltrans)	<b>NOE</b>	Notice of Exception (CEQA)
<b>CTC</b>	California Transportation Committee	<b>NOI</b>	Notice of Intent (NEPA)
<b>CWA</b>	Clean Water Act	<b>NOP</b>	Notice of Preparation (CEQA)
<b>d.B.A.</b>	decibels on the A scale	<b>NO<sub>x</sub></b>	Nitrogen Oxide
<b>DED</b>	Draft Environmental Document	<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>DEIR</b>	Draft Environmental Impact Report	<b>NRHP</b>	National Register of Historic Places
<b>DEIS</b>	Draft Environmental Impact Statement	<b>O<sub>3</sub></b>	Ozone
<b>DEP</b>	Division of Environmental Planning (Caltrans)	<b>OSHA</b>	Occupation Safety and Health Act
<b>DOI</b>	Department of the Interior	<b>PA</b>	Programmatic Agreement
<b>DOT</b>	Department of Transportation	<b>PDT</b>	Project Development Team
<b>DTSC</b>	Department of Toxic Substances Control	<b>PE</b>	Permanent Easement
<b>EIR</b>	Environmental Impact Report	<b>PeMS</b>	Performance Measurement Systems
<b>EIS</b>	Environmental Impact Statement	<b>PM</b>	Post Mile
<b>EPA</b>	Environmental Protection Agency	<b>PM<sub>10</sub></b>	Particulate Matter of 10 microns in diameter or smaller
<b>ESA</b>	Endangered Species Act	<b>POAQC</b>	Project of Air Quality Concern
<b>FCAA</b>	Federal Clean Air Act Amendments of 1990	<b>ppm</b>	Parts per million
<b>FED</b>	Final Environmental Document	<b>PR</b>	Project Report
<b>FEIR</b>	Final Environmental Impact Report	<b>PS&amp;E</b>	Project Specifications and Estimates
<b>FEIS</b>	Final Environmental Impact Statement	<b>PSI</b>	Preliminary Site Investigation (HW)
<b>ROD</b>	Record of Decision (Record of Decision)	<b>PSR</b>	Project Study Report
<b>RTIP</b>	Regional Transportation Improvement Plan	<b>PSSR</b>	Project Scope summary Report
<b>RTP</b>	Regional Transportation Plan	<b>RAP</b>	Relocation Assistance Program
<b>RWQCB</b>	Regional Water Quality Control Board	<b>RCRA</b>	Resource Compensation Recovery Act

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**R/W** Right of Way  
**SBCAG** Santa Barbara County Association of Governments  
**SCAG** Southern California Association of Governments  
**SCCAB** South Central Coast Air Basin  
**SCCIC** South Central Coastal Information Center  
**SCH** State Clearinghouse  
**SHOPP** State Highway Operation and Protection Program  
**SHPO** State Historic Preservation Officer  
**SI** Site Investigation  
**SR** State Route  
**SWPPP** Storm Water Pollution Prevention Plan  
**TASAS** Traffic Accident Surveillance and Analysis System  
**TCE** Temporary Construction Easement  
**TCRP** Transportation Congestion Relief Program  
**TIP** Transportation Improvement Program  
**TMP** Traffic Management Plan  
**TNAP** Traffic Noise Analysis Protocol  
**TSCA** Toxic Substances Control Act  
**TSM** Transportation System Management  
**TWSC** Two Way Stop Control  
**USC** United States Code  
**USFWS** US Fish and Wildlife Service  
**USGS** United States Geological Services  
**VA** Value Analysis  
**VCAPCD** Ventura County Air Pollution Control District  
**VCTC** Ventura County Transportation Commission  
**VMT** Vehicle Miles Traveled  
**VPHPL** Vehicles per hour per lane



## Appendix E Minimization and/or Mitigation Summary

Impact	Avoidance or Minimization Measure Mitigation Measure	Implementation Phase	Implementing Department	Monitoring/Reporting Agency/Department
<b>HUMAN ENVIRONMENT</b>				
Existing and Future Land Use	The communities of Mussel Shoals and La Conchita would not be used for construction staging. A Traffic Management Plan (TMP) would be developed by the contractor which would indicate staging areas.	Final Design and Construction	Design/ Construction	Construction/ Environmental Planning
Coastal Zone	The proposed BUILD alternatives would require coordination with local permitting agencies to ensure approval of Local Coastal Development Plans. A Coastal Development Permit would be required within each jurisdiction (e.g., Santa Barbara and Ventura Counties and the City of Carpinteria) to ensure compliance with the plans and the California Coastal Act.	Final Design and Construction	Environmental Planning	Santa Barbara County/Ventura County/ City of Carpinteria
Parks and Recreation	<p>Construction staging would be implemented so that the affected bikeway would remain open for use during construction of the project, when feasible with K-rail or temporary barriers could be used.</p> <p>The Department shall provide advance notice of any access restrictions and/or closures via appropriate public outreach measures including direct coordination with affected stakeholders when feasible.</p> <p>Alternate route or space would be made available for use during construction and construction time should be limited to minimize potential route closures.</p>	Final Design and Construction	Design/ Construction	Construction/ Environmental Planning
Community Character and Cohesion	The recommendation on noise abatement measures is made by the project proponent, however, an avoidance measure can be considered from the results of the reasonableness determination and information collected during the public input process. The opinions of affected property owners would be considered in reaching a final decision on the noise abatement measures to be provided. Noise abatement within state right-of-way would not be provided if more than 50 percent of the affected property owners do not	Final Design	Design/Noise/ Environmental Planning	Environmental Planning

Impact	Avoidance or Minimization Measure Mitigation Measure	Implementation Phase	Implementing Department	Monitoring/Reporting Agency/Department
	want it. Provision of offsetting benefits and opportunities to enhance communities would also be considered. Views would be carefully considered when mitigation strategies are developed to minimize the potential impacts. The Department staff would participate as needed in meetings with neighborhood assoc., residents and property owners from the outset of project planning and would continue to participate in these meetings through the environmental review process. Consistent with Federal Highway Administration Actions to Address Environmental Justice in Minority Population and Low-Income Populations, the project would be carried out only if "further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effects are not practicable. In determining whether a mitigation measure or an alternative is "practicable," the social, economic (including costs) and environmental effects of avoiding or mitigating the adverse effects would be taken into account (USDOT1998).			
Utilities	If relocation of the telephone poles or other utilities would be required, early coordination and communication with utility provider is recommended so no disruption of services to customers would occur.	Final Design and Construction	Design/ Construction	Construction/ Environmental Planning
Traffic and Transportation	<p>The following measures are recommended to address potential traffic impacts and facilitate traffic flows during project construction:</p> <p><i>Temporary Traffic Controls</i> – Temporary traffic controls, signing, barriers, and flagmen should be employed as necessary and appropriate for the efficient movement of traffic (in accordance with standard traffic engineering practices) to facilitate construction of the project improvements while maintaining traffic flows and minimizing disruption to traffic.</p> <p><i>Street, Ramp Closures and Bikeways (General)</i> – Construction activities should be staged in such a manner to minimize the need for street, ramp</p>	Final Design/ Construction	Design/ Construction	Construction/ Environmental Planning

Impact	Avoidance or Minimization Measure Mitigation Measure	Implementation Phase	Implementing Department	Monitoring/Reporting Agency/Department
	<p>and/or bikeway closures. To the extent possible, such closures (when required) should be made off-peak and/or overnight. In advance of and during closure periods, appropriate temporary signage (in accordance with the Department guidelines) should be used to warn motorists and cyclists of the closure and direct them to alternative routes. Details will be developed as needed during lane closures.</p> <p>A Traffic Management Plan (TMP) would be completed for the construction of the project. Adequate public notice and posted announcements would be required to alert motorists of different construction stages and lane closures. During the early and final stages of construction, the placement and removal of concrete barriers may cause traffic delays. The actual number of stages needed and details for the TMP would be developed during final design of the project. All existing lanes would be opened to traffic during construction.</p> <p>Purchase compact suction street sweeper (600 series Green Machines) to reduce hazards for the Department maintenance crews, cyclists and avoid lane closures for routine maintenance.</p> <p>Drainage grates, curbs, and other items hazardous to bicyclists should not be placed within the bicycle shoulder.</p> <p>Installation of bicycle advisory signs (W11-1) to alert motorists of the potential for bicyclists to travel along the roadway, especially if bicyclists are expected to cross exiting/entering ramp traffic.</p> <p>Design consideration should be given to items that would affect efficient bicycle travel and safety, such as expansion joints and bridge railing heights.</p> <p>During construction of either BUILD Alternatives, measures should be taken to avoid impacts to cyclists. Space should be made available for use during construction and construction time should be limited to minimize potential route closures.</p> <p>For the loss of private parking spaces, the property owner would be compensated.</p>			

Impact	Avoidance or Minimization Measure Mitigation Measure	Implementation Phase	Implementing Department	Monitoring/Reporting Agency/Department
Visual/Aesthetics	<p>The following project considerations would be incorporated to minimize impacts, ensure compatibility with local policies and the surrounding visual environment: The decision on noise abatement measures would be made by the project proponent, considering the results of the reasonableness determination and information collected during the public input process. The opinions of the affected property owners would be considered in reaching a final decision on the recommended noise abatement measures. Noise abatement within the State right-of-way would not be provided if more than 50% of the affected property owners do not want it.</p> <p>Retain as much existing vegetation as possible or plant vegetation in the median such as shrubs up to 4 to 5 feet tall. An approved plant list shall be provided by the Department. Soundwalls would be planted with wall vines to soften their appearance to reduce associated visual impact. Visible signage for the Cliff House Inn or installation of a type of soundwall that offers more visibility of the Inn.</p>	Construction	Environmental Planning	Construction/ Environmental Planning
Cultural Resources	<p>If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will identify and notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact District 7 Environmental Branch so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.</p> <p>As there are known cultural resources nearby, it is recommended that ESA fencing be placed along the entire edge of the project (i.e., construction limits) within established areas adjacent to identified site locations (which have been</p>	Construction	Environmental Planning	Construction/ Environmental Planning

Impact	Avoidance or Minimization Measure Mitigation Measure	Implementation Phase	Implementing Department	Monitoring/Reporting Agency/Department
	determined eligible for the purposes of this undertaking), and that an archaeological monitor be present during any ground disturbing activities. Should any cultural resources be encountered during construction, all work in the area of the discovery must stop until the on-site monitor can evaluate the nature and significance of the find.			
<b>PHYSICAL ENVIRONMENT</b>				
Water Quality and Stormwater Runoff	<p>Avoidance and minimization measures for storm water are accomplished by implementation of approved Best Management Practices (BMPs), which are generally broken down into four categories: Pollution Prevention, Treatment, Construction, and Maintenance BMPs. The Department's Storm Water Program contains guidance for implementation of each of these BMPs. Certain projects may require installation and maintenance of permanent controls to treat storm water. Selection and design of permanent project BMPs is refined as the project progresses through the planning stage and into final design.</p> <p>Construction Site BMPs for this project shall include the following categories:</p> <p>Soil stabilization Practices</p> <p>Sedimentation Control Practices</p> <p>Tracking Control Practices</p> <p>Wind Erosion Controls</p> <p>Non-Storm Water Controls</p> <p>Waste Management and Materials Pollution Controls</p> <p>Street Sweeping and Vacuuming, Storm Drain Inlet Protection, Wind Erosion Control, Noise Pollution Control, Water Conservation Practices, Paving and Grinding Operation, Illicit Connection/Illegal Discharge Detection and Reporting, Vehicle and Equipment Fueling, Concrete Curing, Concrete Finishing, Material Delivery and Storage, Material Use, Stockpile Management, Concrete Waste Management, Spill Prevention and Control, Solid Waste Management, Contaminated Soil Management, Concrete Waste Management, Sanitary/Septic</p>	Final Design/ Construction	Design/ Construction	Construction/ Environmental Planning/ Regional Water Quality Control Board

<b>Impact</b>	<b>Avoidance or Minimization Measure Mitigation Measure</b>	<b>Implementation Phase</b>	<b>Implementing Department</b>	<b>Monitoring/Reporting Agency/Department</b>
	Waste Management, and Liquid Waste Management.			
Paleontology	It is recommended that a qualified paleontological monitor oversee all excavations in the high sensitivity formations described above. If sensitive paleontological resources are discovered during construction, work will be stopped in the immediate vicinity of the discovery (30-foot radius) until the fossils can be properly preserved, labeled and stored.	Final Design/ Construction	Design/ Hazardous Waste/ Environmental Planning	Construction/ Environmental Planning
Hazardous Waste/Materials	<p>Aerially Deposited Lead was found to be present in different concentrations within the project limits. Per Department requirements, the contractor would prepare a project specific Lead Compliance Plan to prevent or minimize worker exposure to lead-contaminated soil. The plans should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other appropriate health and safety protocols and procedures for handling of lead contaminated soil.</p> <p>Removal and Disposal of Lead and Chromium in Yellow Stripes would be addressed during the Design Phase. When detailed plans regarding handling the existing yellow stripes and adjacent pavement become available, the appropriate methodology and special provisions for proper removal and disposal would be provided and followed during construction.</p>	Final Design/ Construction	Design/ Hazardous Waste/ Environmental Planning	Construction/ Environmental Planning
Air Quality	Since the air pollutant levels in Ventura County exceed the state and federal ozone standards and the state PM <sub>10</sub> standard, it is recommended to implement measures in Sections 7.4.1, "Fugitive Dust Mitigation Measures," and 7.4.3, "ROC and NOx Construction Mitigation Measures," in all projects that include construction activities, with special attention given to projects that require a grading permit. If the project poses a risk for Valley Fever (see Section 6.3, "San Joaquin Valley Fever"), VCAPCD recommends that the measures in Section 7.4.2, "Valley Fever Mitigation Measures," be included (in addition to the measures in Section 7.4.1, "Fugitive Dust Mitigation Measures") to minimize Valley Fever fungal spore entrainment.	Final Design/ Construction	Design/ Construction/ Environmental Planning	Construction/ Environmental Planning/ VCAPCD

Impact	Avoidance or Minimization Measure Mitigation Measure	Implementation Phase	Implementing Department	Monitoring/Reporting Agency/Department
	<p>Air quality impacts resulting from construction activities would be reduced through the implementation of the following measures (but are not limited to):</p> <p>The construction contractor shall comply with the Department's Standard Specifications Section 7-1.01F and Section 10 of Caltrans' Standard Specifications (1999).</p> <p>Section 7, "Legal Relations and Responsibility," addresses the contractor's responsibility on many items of concern, such as: air pollution; protection of lakes, streams, reservoirs, and other water bodies; use of pesticides; safety; sanitation; and convenience of the public; and damage or injury to any person or property as a result of any construction operation. Section 7-1.01F specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.</p> <p>Section 10 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are contained in Section 18.</p> <p>Water or dust palliative will be applied to the site and equipment as frequently as necessary to control fugitive dust emissions.</p> <p>Soil binder will be spread on any unpaved roads used for construction purposes, and all project construction parking areas.</p> <p>Trucks will be washed off as they leave the right of way as necessary to control fugitive dust emissions.</p> <p>Construction equipment and vehicles shall be properly tuned and maintained. Low-sulfur fuel shall be used in all construction equipment as provided in California Code of Regulations Title 17, Section 93114.</p> <p>Develop a dust control plan documenting sprinkling, temporary paving, speed limits, and expedited revegetation of disturbed slopes as needed to minimize construction impacts to</p>			



Impact	Avoidance or Minimization Measure Mitigation Measure	Implementation Phase	Implementing Department	Monitoring/Reporting Agency/Department
	<p>existing communities.</p> <p>Locate equipment and materials storage sites as far away from residential and park uses as practical. Keep construction areas clean and orderly.</p> <p>To the extent feasible, establish ESAs for sensitive air receptors within which construction activities involving extended idling of diesel equipment would be prohibited.</p> <p>Use track-out reduction measures such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic.</p> <p>Cover all transported loads of soils and wet materials prior to transport, or provide adequate freeboard (space from the top of the material to the top of the truck) to reduce PM<sub>10</sub> and deposition of particulate during transportation.</p> <p>Remove dust and mud that are deposited on paved, public roads due to construction activity and traffic to decrease particulate matter.</p> <p>To the extent feasible, route and schedule construction traffic to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.</p> <p>Install mulch or plant vegetation as soon as practical after grading to reduce windblown particulate in the area.</p> <p>While unlikely, if naturally occurring asbestos, serpentine, or ultramafic rock is discovered during grading operations Section 93105, Title 17 of the California Code of Regulations requires notification to the APCD by the next business day and implementation of the following measures within 24 hours:</p> <p>Unpaved areas subject to vehicle traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 percent asbestos;</p> <p>The speed of any vehicles and equipment</p>			

Impact	Avoidance or Minimization Measure Mitigation Measure	Implementation Phase	Implementing Department	Monitoring/Reporting Agency/Department
	<p>traveling across unpaved areas must be no more than fifteen (15) miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust that is visible crossing the project boundaries;</p> <p>Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 percent asbestos; and</p> <p>Activities must be conducted so that no track-out from any road construction project is visible on any paved roadway open to the public.</p> <p>Equipment and operations must not cause the emission of any dust that is visible crossing the project boundaries.</p>			
Noise and Vibration	<p>If during final design, conditions have substantially changed, noise abatement may not be necessary. The final decision of the noise abatement would be made upon completion of the project design and the public involvement processes. The decision on noise abatement measures is made by the Department, considering the results of the reasonableness determination and information collected during the public input process. The opinions of the affected property owners are considered in reaching a final decision on the noise abatement measures to be provided. Noise abatement within the State right-of-way will not be provided if more than 50% of the affected property owners do not want it.</p> <p>Construction noise impacts are regulated by Department standard specifications, Section 7-1.01I, Sound control Requirements. These requirements state that noise levels generated during construction shall comply with applicable local, state, and federal rules, regulations and ordinances. In addition, the Standard Specifications require that all contractors equipment operating on the job site be equipped with mufflers that are recommended by the manufacturer of the vehicle.</p>	Final Design/ Construction	Design/Noise/ Construction/ Environmental Planning	Construction/ Environmental Planning

Impact	Avoidance or Minimization Measure Mitigation Measure	Implementation Phase	Implementing Department	Monitoring/Reporting Agency/Department
	<p>Department Special Provision 300 states that "The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 dbA at a distance of 15 m. This requirement shall not relieve the Contractor from responsibility for complying with local ordinances regulating noise level. Implementing the following measures would minimize temporary construction noise impacts:</p> <p>Equipment Noise Control should be applied to revising old equipment and designing new equipment to meet specified noise levels.</p> <p>In-Use Noise Control where existing equipment is not permitted to produce noise levels in excess of specified limits.</p> <p>Site Restrictions is an attempt to achieve noise reduction through modifying the time, place, or method of operation of a particular source.</p> <p>Personal Training of operators and supervisors is needed to become more aware of the construction site noise, and are given instruction non methods that they can implement to improve condition in the local communities.</p>			
<b>BIOLOGICAL ENVIRONMENT</b>				
Wetlands and Other Waters	<p>The six jurisdictional drainages with culvert extensions associated with FULL BUILD would require work to be done during the dry season (April 1 through October 31).</p> <p>Six culvert extensions associated with FULL BUILD would have both permanent and temporary impacts to jurisdictional waters of the U.S. This work would require permits under sections 404 and 401 of the Clean Water Act and a Streambed Alteration Agreement under Section 1601 of the California Department of Fish and Game Code 1600 (et seq.). These permits would be required from the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, and the California Department of Fish and Game. The project would also require a coastal development permit.</p>	Final Design/ Construction	Design/ Construction/ Environmental Planning	Construction/ Environmental Planning/ US Army Corps of Engineers/ California Department of Fish and Game/ Regional Water Quality Control Board/ California Coastal Commission
Animal Species	Avoidance and minimization measures for this	Final Design/	Design/ Environmental	Construction/

Impact	Avoidance or Minimization Measure Mitigation Measure	Implementation Phase	Implementing Department	Monitoring/Reporting Agency/Department
	project include the establishment and use of Environmentally Sensitive Area (ESA) fencing. The ESA limits will be shown on the final plan sheets. Prior to construction the Resident Engineer shall contact District 7 Construction Liaison or appropriate Environmental Planning staff in order to set up the ESA limits in the field.	Construction	Planning/ Construction	Environmental Planning
Invasive Species	To avoid and minimize the spread of invasive weeds, the invasive species removed during construction activity and would not be replanted as part of highway landscaping. Care shall be taken to avoid including any species that occurs on the California Invasive Plant Council's Invasive Plant inventory in the Department erosion control seed mix or landscaping plans for the project. In compliance with the Executive Order on Invasive Species, Executive Order 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions would be taken if invasive species were found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.	Final Design/ Construction	Design/ Environmental Planning/ Construction	Construction/ Environmental Planning



## Appendix F Noise Aerial Maps and Table



- 20-Minute Noise Measurement Location
- 24-Hour Noise Measurement Location

Proposed Soundwall



Existing Worst-hour Noise Levels Are Shown in Color Yellow  
 Future Worst-hour Noise Levels Are Shown in Color Red





- 20-Minute Noise Measurement Location
- 24-Hour Noise Measurement Location

Proposed Soundwall



Existing Worst-hour Noise Levels Are Shown in Color Yellow  
 Future Worst-hour Noise Levels Are Shown in Color Red





- 20-Minute Noise Measurement Location
- 24-Hour Noise Measurement Location

Proposed Soundwall



Existing Worst-hour Noise Levels Are Shown in Color Yellow  
Future Worst-hour Noise Levels Are Shown in Color Red





- 20-Minute Noise Measurement Location
- 24-Hour Noise Measurement Location

Proposed Soundwall



Existing Worst-hour Noise Levels Are Shown in Color **Yellow**  
 Future Worst-hour Noise Levels Are Shown in Color **Red**





- 20-Minute Noise Measurement Location
- 24-Hour Noise Measurement Location



Proposed Soundwall




Existing Worst-hour Noise Levels Are Shown in Color Yellow  
 Future Worst-hour Noise Levels Are Shown in Color Red





-  20-Minute Noise Measurement Location
-  24-Hour Noise Measurement Location

Proposed Soundwall 

Existing Worst-hour Noise Levels Are Shown in Color Yellow  
Future Worst-hour Noise Levels Are Shown in Color Red







- 20-Minute Noise Measurement Location
- 24-Hour Noise Measurement Location



Proposed Soundwall



Existing Worst-hour Noise Levels Are Shown in Color Yellow  
 Future Worst-hour Noise Levels Are Shown in Color Red





-  **20-Minute Noise Measurement Location**
-  **24-Hour Noise Measurement Location**

### Proposed Soundwall



Existing Worst-hour Noise Levels Are Shown in Color Yellow  
Future Worst-hour Noise Levels Are Shown in Color Red





- 20-Minute Noise Measurement Location
- 24-Hour Noise Measurement Location

Proposed Soundwall

Existing Worst-hour Noise Levels Are Shown in Color Yellow

Future Worst-hour Noise Levels Are Shown in Color Red





- 20-Minute Noise Measurement Location
- 24-Hour Noise Measurement Location

Proposed Soundwall



Existing Worst-hour Noise Levels Are Shown in Color Yellow  
 Future Worst-hour Noise Levels Are Shown in Color Red

**Table A. Predicted Noise Reduction For Soundwalls On U.S. 101 - Minimum Build**

Receiver	Predicted Worst-Hour Noise Level dBA – Leq[H]	Soundwall Number(s)	Soundwall Location	2.44-m (8 ft)		3.05-m (10 ft)		3.66-m (12 ft)		4.27-m (14 ft)		4.88-m (16 ft)	
				Noise Level (dBA)	Noise Reduction (dBA)	Noise Level (dBA)	Noise Reduction (dBA)	Noise Level (dBA)	Noise Reduction (dBA)	Noise Level (dBA)	Noise Reduction (dBA)	Noise Level (dBA)	Noise Reduction (dBA)
A1	67	101 + 102	ES	66	1	65	2	65	2	65	2	-	-
		-	R/W	66	1	65	2	65	2	64	3	64	3
A2	67	101 + 102	ES	63	4	<u>61</u>	<u>6</u>	<u>60</u>	<u>7</u>	<u>59</u>	<u>8</u>	-	-
		-	R/W	67	0	66	1	64	3	63	4	<u>61</u>	<u>6</u>
A3	66	102	ES	62	4	<u>60</u>	<u>6</u>	<u>59</u>	<u>7</u>	<u>58</u>	<u>8</u>	-	-
		-	R/W	66	0	65	1	64	2	62	4	<u>61</u>	<u>5</u>
A4	67	102	ES	63	4	<u>61</u>	<u>6</u>	<u>60</u>	<u>7</u>	<u>60</u>	<u>7</u>	-	-
		-	R/W	67	0	65	2	65	2	63	4	<u>61</u>	<u>6</u>
A5	67	102	ES	63	4	<u>62</u>	<u>5</u>	<u>61</u>	<u>6</u>	<u>61</u>	<u>6</u>	-	-
		-	R/W	66	1	65	2	64	3	<u>62</u>	<u>5</u>	<u>61</u>	<u>6</u>
B	70	103 + 104	ES	<u>65</u>	<u>5</u>	<u>65</u>	<u>5</u>	<u>63</u>	<u>7</u>	<u>63</u>	<u>7</u>	-	-
		-	R/W	67	3	66	4	<u>65</u>	<u>5</u>	<u>64</u>	<u>6</u>	<u>63</u>	<u>7</u>
BM1	67	103 + 104	ES	63	4	63	4	<u>61</u>	<u>6</u>	<u>61</u>	<u>6</u>	-	-
		-	R/W	65	2	64	3	63	4	<u>62</u>	<u>5</u>	<u>61</u>	<u>6</u>
B1	70	103 + 104	ES	66	4	66	4	<u>65</u>	<u>5</u>	<u>65</u>	<u>5</u>	-	-
		-	R/W	68	2	67	3	66	4	66	4	<u>65</u>	<u>5</u>
B2	72	104	ES	<u>67</u>	<u>5</u>	<u>66</u>	<u>6</u>	<u>64</u>	<u>8</u>	<u>63</u>	<u>9</u>	-	-
		-	R/W	70	2	68	4	<u>67</u>	<u>5</u>	<u>65</u>	<u>7</u>	<u>63</u>	<u>9</u>
B3	69	104	ES	<u>64</u>	<u>5</u>	<u>64</u>	<u>5</u>	<u>62</u>	<u>7</u>	<u>60</u>	<u>9</u>	-	-
		-	R/W	65	4	65	4	<u>63</u>	<u>6</u>	<u>61</u>	<u>8</u>	<u>60</u>	<u>9</u>
B4	68	104	ES	65	3	<u>63</u>	<u>5</u>	<u>62</u>	<u>6</u>	<u>60</u>	<u>8</u>	-	-
		-	R/W	66	2	65	3	<u>63</u>	<u>5</u>	<u>62</u>	<u>6</u>	<u>60</u>	<u>8</u>
D	66	-	ES	63	3	62	4	<u>60</u>	<u>6</u>	<u>59</u>	<u>7</u>	-	-
		105	R/W	62	4	<u>61</u>	<u>5</u>	<u>61</u>	<u>5</u>	<u>60</u>	<u>6</u>	<u>60</u>	<u>6</u>
D1	67	-	ES	66	1	64	3	<u>62</u>	<u>5</u>	<u>60</u>	<u>7</u>	-	-
		105	R/W	63	4	<u>62</u>	<u>5</u>	<u>61</u>	<u>6</u>	<u>60</u>	<u>7</u>	<u>60</u>	<u>7</u>
D2	68	-	ES	67	1	66	2	64	4	<u>62</u>	<u>6</u>	-	-
		105	R/W	<u>63</u>	<u>5</u>	<u>63</u>	<u>5</u>	<u>62</u>	<u>6</u>	<u>62</u>	<u>6</u>	<u>61</u>	<u>7</u>
D5	68	-	ES	67	1	66	2	65	3	64	4	-	-
		106	R/W	<u>63</u>	<u>5</u>	<u>62</u>	<u>6</u>	<u>62</u>	<u>6</u>	<u>61</u>	<u>7</u>	<u>61</u>	<u>7</u>
D6	71	-	ES	71	0	70	1	68	3	<u>66</u>	<u>5</u>	-	-
		106	R/W	<u>65</u>	<u>6</u>	<u>64</u>	<u>7</u>	<u>63</u>	<u>8</u>	<u>62</u>	<u>9</u>	<u>62</u>	<u>9</u>

**Table B Predicted Noise Reduction For Soundwalls On U.S. 101 - Full Build**

Receiver	Predicted Worst-Hour Noise Level dBA - Leq[H]	Soundwall Number(s)	Soundwall Location	2.44-m (8 ft)		3.05-m (10 ft)		3.66-m (12 ft)		4.27-m (14 ft)		4.88-m (16 ft)	
				Noise Level (dBA)	Noise Reduction (dBA)	Noise Level (dBA)	Noise Reduction (dBA)	Noise Level (dBA)	Noise Reduction (dBA)	Noise Level (dBA)	Noise Reduction (dBA)	Noise Level (dBA)	Noise Reduction (dBA)
A1	67	101 + 102	ES	66	1	65	2	65	2	65	2	-	-
		-	R/W	66	1	65	2	65	2	64	3	64	3
A2	67	101 + 102	ES	63	4	<u>61</u>	<u>6</u>	<u>60</u>	<u>7</u>	<u>59</u>	<u>8</u>	-	-
		-	R/W	67	0	66	1	64	3	63	4	<u>61</u>	<u>6</u>
A3	66	102	ES	62	4	<u>60</u>	<u>6</u>	<u>59</u>	<u>7</u>	<u>58</u>	<u>8</u>	-	-
		-	R/W	66	0	65	1	64	2	62	4	<u>61</u>	<u>5</u>
A4	67	102	ES	63	4	<u>61</u>	<u>6</u>	<u>60</u>	<u>7</u>	<u>60</u>	<u>7</u>	-	-
		-	R/W	67	0	65	2	65	2	63	4	<u>61</u>	<u>6</u>
A5	67	102	ES	63	4	<u>62</u>	<u>5</u>	<u>61</u>	<u>6</u>	<u>61</u>	<u>6</u>	-	-
		-	R/W	66	1	65	2	64	3	<u>62</u>	<u>5</u>	<u>61</u>	<u>6</u>
B	70	103 + 104	ES	<u>65</u>	<u>5</u>	<u>65</u>	<u>5</u>	<u>63</u>	<u>7</u>	<u>63</u>	<u>7</u>	-	-
		-	R/W	67	3	66	4	<u>65</u>	<u>5</u>	<u>64</u>	<u>6</u>	<u>63</u>	<u>7</u>
BM1	67	103 + 104	ES	63	4	63	4	<u>61</u>	<u>6</u>	<u>61</u>	<u>6</u>	-	-
		-	R/W	65	2	64	3	63	4	<u>62</u>	<u>5</u>	<u>61</u>	<u>6</u>
B1	70	103 + 104	ES	66	4	66	4	<u>65</u>	<u>5</u>	<u>65</u>	<u>5</u>	-	-
		-	R/W	68	2	67	3	66	4	66	4	<u>65</u>	<u>5</u>
B2	72	104	ES	<u>67</u>	<u>5</u>	<u>66</u>	<u>6</u>	<u>64</u>	<u>8</u>	<u>63</u>	<u>9</u>	-	-
		-	R/W	70	2	68	4	<u>67</u>	<u>5</u>	<u>65</u>	<u>7</u>	<u>63</u>	<u>9</u>
B3	69	104	ES	<u>64</u>	<u>5</u>	<u>64</u>	<u>5</u>	<u>62</u>	<u>7</u>	<u>60</u>	<u>9</u>	-	-
		-	R/W	65	4	65	4	<u>63</u>	<u>6</u>	<u>61</u>	<u>8</u>	<u>60</u>	<u>9</u>
B4	68	104	ES	65	3	<u>63</u>	<u>5</u>	<u>62</u>	<u>6</u>	<u>60</u>	<u>8</u>	-	-
		-	R/W	66	2	65	3	<u>63</u>	<u>5</u>	<u>62</u>	<u>6</u>	<u>60</u>	<u>8</u>
D	66	-	ES	63	3	62	4	<u>60</u>	<u>6</u>	<u>59</u>	<u>7</u>	-	-
		105	R/W	62	4	<u>61</u>	<u>5</u>	<u>61</u>	<u>5</u>	<u>60</u>	<u>6</u>	<u>60</u>	<u>6</u>
D1	67	-	ES	66	1	64	3	<u>62</u>	<u>5</u>	<u>60</u>	<u>7</u>	-	-
		105	R/W	63	4	<u>62</u>	<u>5</u>	<u>61</u>	<u>6</u>	<u>60</u>	<u>7</u>	<u>60</u>	<u>7</u>
D2	68	-	ES	67	1	66	2	64	4	<u>62</u>	<u>6</u>	-	-
		105	R/W	<u>63</u>	<u>5</u>	<u>63</u>	<u>5</u>	<u>62</u>	<u>6</u>	<u>62</u>	<u>6</u>	<u>61</u>	<u>7</u>
D5	68	-	ES	67	1	66	2	65	3	64	4	-	-
		106	R/W	<u>63</u>	<u>5</u>	<u>62</u>	<u>6</u>	<u>62</u>	<u>6</u>	<u>61</u>	<u>7</u>	<u>61</u>	<u>7</u>
		-	ES	71	0	70	1	68	3	<u>66</u>	<u>5</u>	-	-

D6	71	-	ES	71	0	70	1	68	3	<u>66</u>	<u>5</u>	-	-
Minimum requirements : 5 dBA noise reduction						<u>64</u> Freeway Stations for Soundwalls				<u>61</u> Freeway Stations for Soundwalls			
ES = Edge of Shoulder						101	47+00 to 50+40			105*	253+00 to 272+00		
R/W = Right of Way						102	52+80 to 66+00			106*	275+00 to 286+43		
						103	74+00 to 80+60						
						104	82+40 to 103+00						

# Appendix G Letter to the State Historic Preservation Officer

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STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

**DEPARTMENT OF TRANSPORTATION**

100 S. Main Street, MS 16A  
Los Angeles, CA 90012 (213) 897-2795  
PHONE (213) 897-2795  
FAX (213) 897-9572



*Flex your power!  
Be energy efficient!*

May 30, 2008

Milford Wayne Donaldson, FAIA  
State Historic Preservation Officer  
Office of Historic Preservation  
P.O. Box 942896  
Sacramento, CA 94296-0001

Re: Notification of Finding of No Adverse Effect with Standard Conditions for the Proposed  
U.S. 101 HOV Widening Project

Dear Mr. Donaldson:

The California Department of Transportation (Department) is providing notification to the State Historic Preservation Officer (SHPO) regarding the finding of effect for the U.S. 101 HOV Project on historic properties. This notification is undertaken in accordance with the January 2004 *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Preservation Officer, and the California Department of Transportation (PA)*.

Enclosed you will find a Historic Property Survey Report and Finding of No Adverse Effect with Standard Conditions/ESA Action Plan for the U.S. 101 HOV Project, Santa Barbara and Ventura Counties, California. Under the PA, Caltrans is responsible for ensuring the appropriateness of the Area of Potential Effects (APE) (Stipulation VIII.A) and the adequacy of historic property identification efforts (Stipulation VIII.B). In accordance with Stipulation IX.B of the PA, Caltrans finds that there are historic properties within the APE that may be affected by the undertaking.

The Department proposes to improve and upgrade the existing divided expressway on US-101. The Project is located in Ventura County near the communities of Mussel Shoals, La Conchita, and the Tank Farm; from PM R39.8 to PM R43.1, and in Santa Barbara County from PM R0.0 to PM R2.2.

Identification efforts for the proposed U.S. 101 HOV project resulted in the discovery of five resources within the APE that could potentially be affected by the proposed project. These resources include CA-SBA-1, CA-SBA-1168, CA-VEN-141, CA-SBA-234/644, and CA-VEN-1110. While the sites have not been formally evaluated for eligibility, Caltrans is considering them eligible for the National Register of Historic Places (NRHP) for the purposes of the present undertaking. Though these resources are relatively close to key project activities, they can be easily avoided by the establishment of an Environmentally Sensitive Areas (ESAs). Pursuant to Stipulation VIII.C.3 of the PA, Caltrans is considering these sites to be eligible to the NRHP

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Wayne Donaldson, FAIA  
April 30, 2008  
Page 2

under Criterion D for the purposes of this undertaking and will establish and enforce ESAs to ensure that there will be no adverse effects to the properties as a result of the proposed project, pursuant to Stipulation X.B.2.a(ii). Native American consultation confirmed that the resources only have values that would qualify them as NRHP eligible under Criterion D.

This letter and attached documentation serve as notification that Caltrans' finding for this undertaking is "No Adverse Effect with Standard Conditions" pursuant to Stipulation X.B.2(b) of the PA.

If you need any additional information, please do not hesitate to contact Caltrans PQS Alex Kirkish at (213) 897-2795 (e-mail: alex\_kirkish@dot.ca.gov). Thank you for your assistance with this undertaking.

Sincerely,



Gary Iverson, Chief  
Cultural Resources Branch

Attachments: (bound as a document package)

(1) *Historic Property Survey Report the U.S. 101 HOV Project, Santa Barbara and Ventura Counties, California*

cc: Headquarters, Environmental Division  
Charlie Cooke, Chumash, Kitanemuk and Vanyume Consultant

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